

COUNTY COUNCIL OF STIRLING
Public Health Department



ANNUAL REPORT

For the Year 1935

By

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NOTE.

The incidence of Infectious Disease throughout the year was somewhat above average, with a general tendency to decrease.

During the year two Sectioned Pavilions were erected at Bannockburn Hospital. These provide a very desirable addition to the accommodation for the treatment of Infectious Disease.

A notable feature of the work during the year was the Census taken under the Housing (Scotland) Act, 1935, reviewing as it did the extent of overcrowding in the County in terms of the Act. At the same time opportunity was taken to make a further survey of the houses in the County under the Housing (Scotland) Act, 1930. The double Survey was practically completed before the 1935 Act was finally passed, and the County forms and procedure were largely adopted throughout Scotland by other Local Authorities.

THOMAS ADAM,
County Medical Officer.

COUNTY BUILDINGS,
STIRLING, *October, 1936.*

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The Department of Health for Scotland, by virtue of their powers under Section 15 of the Public Health (Scotland) Act, 1897, call upon every Medical Officer of Health to prepare a Report for the year ended 19th December, 1935, under the following heads :—

A.—GENERAL SANITATION.

1. WATER SUPPLIES.—Quality and sufficiency.
2. DRAINAGE SYSTEM.—Efficiency.
3. SEWAGE PURIFICATION AND DISPOSAL.—Methods and efficiency.
4. RIVERS POLLUTION.—Presence or absence, nature and sources.
5. OFFENSIVE TRADES.—Action taken.
6. MISCELLANEOUS.—Any other sanitary matters calling for comment.

B.—HOUSING AND TOWN PLANNING.

1. HOUSING (SCOTLAND) ACTS, 1925 AND 1930, AND HOUSING (RURAL WORKERS) ACTS, 1926 AND 1931.—Proceedings. Include reference to:—
 - (a) Sufficiency of working-class houses;
 - (b) Habitability of existing houses—action taken to deal with defective or uninhabitable houses;
 - (c) Clearance or improvement areas under Part I. of the Housing (Scotland) Act, 1930—proposals under consideration or contemplated; and
 - (d) Overcrowding—Action taken.
2. TOWN PLANNING.—Conditions pointing to expediency of a scheme for the proper control of further development or redevelopment.

C.—FOOD SUPPLY—.

1. MILK.—Administration of Acts, Orders, and Regulations. Include reference to:—
 - (a) Bacteriological examination of samples in terms of Sections 20 and 21 of the 1914 Act—arrangements made—notes on samples taken;
 - (b) Milk consigned from other areas—action taken;
 - (c) Dirty milk (Section 4 (3) of 1914 Act)—measures for detection;
 - (d) Outbreaks of disease attributed to milk or milk products; and
 - (e) Milk grading—progress.

2. MEAT.—Administration of Sections 33 and 43 of the Public Health (Scotland) Act, 1897, the Public Health (Meat) Regulations (Scotland), 1932, and the Public Health (Preservatives, etc., in Food) Regulations. Include reference to slaughter-houses.
3. MISCELLANEOUS.—Administration of other Acts, Orders, and Regulations governing the supervision of the food supply, e.g. the Food and Drugs (Adulteration Act, 1928, the Imported Food Regulations, and the Public Health Preservatives, etc., in Food) Regulations. Include reference to the sanitary condition of premises where foods are manufactured, prepared, stored, or exposed for sale for human consumption. Include particulars of any instruction, propaganda, or other special work on nutrition.

D.—MEDICAL SERVICES.

Include reference (with statistics) to:—

1. MATERNITY AND CHILD WELFARE.
2. SCHOOL CHILDREN.—Medical inspection, supervision and treatment.
3. INFECTIOUS DISEASES, notifiable and non-notifiable—incidence—any special action to deal with influenza, pneumonia, measles, whooping-cough, encephalitis lethargica, infective jaundice, psittacosis. Refer to any arrangements for supply of diphtheria antitoxin, to any use made of Schick and Dick tests and any methods of artificial immunisation against diphtheria and scarlet fever.
4. TUBERCULOSIS.—Prevention and treatment.
5. VENEREAL DISEASES.—Prevention and treatment.
6. NEUROLOGICAL AND PSYCHIATRIC SERVICE (for mental disability in the pre-certification stages)—provision made or contemplated.
7. SICK POOR.—Arrangements for medical care and nursing—how far satisfactory—co-ordination with other health services.
8. HOSPITAL AND AMBULANCE FACILITIES.—Sufficiency—redundancy—reorganisation—extension.

E.—PORT SANITARY ADMINISTRATION.

Officers concerned should add notes under this heading, including a reference to the fumigation of ships; the issue of deratisation or deratisation exemption certificates, and the work done under the Port Sanitary Regulations (Scotland) 1933.

7.—WORKSHOPS AND WORKPLACES.

Officers are reminded of their duty to refer in their annual reports to the administration of the Factory Acts in workshops and workplaces. Three copies of the form of Tabular Statement of Proceedings under the 1901 Act are enclosed. When completed, one copy should be forwarded to the Secretary of State for Home Affairs, (Statistical Branch), Home Office, 20 Gt. Smith Street, London, S.W.1., in advance of the report referred to in Section 132 of the Act; one copy should be transmitted to the local authority; and the remaining copy should be retained for reference.

REPORT.

I.—GENERAL.

STAFF.

In September, Mr. McLachlan who had acted as Second Assistant to Mr. McGregor, County Veterinary Inspector, resigned his post in order to take up one in England, and Mr. Samuel Jamieson, M.R.C.V.S., has since been appointed in his stead, otherwise, the personnel of the staff remains as before.

RAINFALL.

The rainfall for 1935 was just about the average for the past ten years, and below, I give a jotting of the rainfall in the Stirling area month by month since 1925 up to 1934, the average rainfall being also given. It will be seen from these averages that the wettest months of the year have been January, October, and November, the driest being February, March, and April.

RAINFALL IN STIRLING AREA.—1925-1934.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1925	4.66	4.56	1.46	3.94	4.95	0.43	1.39	3.75	3.64	3.93	0.96	2.70	36.37
1926	5.72	5.26	2.40	1.92	2.98	2.54	4.01	3.38	3.35	4.26	6.65	0.95	43.42
1927	5.08	2.46	3.04	1.84	2.51	3.92	3.87	6.84	5.96	5.71	3.08	0.99	45.30
1928	11.21	5.25	4.06	1.35	1.54	4.26	2.23	5.00	3.45	6.05	5.30	4.34	54.04
1929	1.54	1.57	0.65	0.65	2.52	1.74	2.59	4.78	0.81	4.41	5.91	7.13	34.30
1930	4.62	0.28	2.76	0.87	1.36	2.38	5.32	6.22	4.39	4.90	4.28	4.38	41.76
1931	3.55	2.80	1.08	2.01	4.23	5.78	4.82	2.01	1.06	2.44	8.42	2.95	41.15
1932	5.90	0.03	1.99	4.13	3.40	1.50	2.40	1.28	2.98	5.65	2.82	7.97	49.05
1933	4.90	2.49	2.22	1.15	2.44	0.97	3.27	1.67	0.95	3.23	2.35	0.51	26.15
1934	5.91	0.24	2.59	4.27	1.57	2.03	2.73	3.67	4.78	5.60	0.51	4.88	38.68
1	53.09	24.94	22.25	22.13	27.50	25.55	32.63	38.50	31.37	46.18	40.28	36.80	410.22
age	5.31	2.49	2.22	2.21	2.75	2.55	3.26	3.85	3.14	4.61	4.03	3.68	41.02
ion													
month													
wet-													
	1	10	11	12	8	9	6	4	7	2	3	5	

Table I.—RAINFALL DURING 1935.

Station	Observer	Rain Gauge			Monthly Rainfall in Inches—1935													
		Diameter	Height		ft.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
			above Ground	Height above Sea-Level														
Laundeston	Mrs Ballantyne ..	ins.	ft. in.	ft.	(Rain in Inches Days on which rain fell ..	1.28	3.46	1.56	2.74	0.57	3.75	1.14	2.01	5.33	7.87	4.64	2.02	36.37
Buckleburn Reservoir	John Cullen, Esq.	8	1 0	825	Rain in Inches	1.74	3.92	1.59	2.94	0.32	6.28	2.00	3.39	9.11	13.77	5.64	3.98	54.68
Buckleburn Filters ..	Do.	8	1 0	760	Rain in Inches	1.57	3.43	1.42	2.62	0.27	4.82	1.21	2.71	7.24	10.66	4.71	3.05	43.71
Little Denny Filters ..	Do.	8	1 0	243	Rain in Inches	1.95	4.62	1.70	3.00	0.33	3.75	1.67	2.45	6.45	11.10	5.05	2.05	44.12
Little Denny Reservoir	Do.	8	1 0	325	Rain in Inches	2.00	4.82	1.68	2.90	0.32	3.80	1.65	2.44	6.30	10.70	5.10	2.08	43.79
Faughlin Reservoir ..	Do.	8	1 0	707	Rain in Inches	2.69	6.50	2.19	4.10	0.31	6.00	1.80	4.71	9.27	13.28	6.59	3.57	61.01
Earsburn Reservoir ..	Do.	8	1 0	1202	Rain in Inches	2.27	7.01	2.38	5.13	0.43	7.89	1.73	2.82	7.87	13.98	5.42	4.03	60.96
Lea Cott., Bridge of Allan	Wm. Watt, Esq. ..	5	1 0	50	Rain in Inches	1.07	2.77	1.48	3.27	0.20	3.69	0.74	2.00	5.08	6.81	3.59	2.37	33.05
Saatchie House, Stirling	J. Fyfe, Esq. ..	8	..	151	Rain in Inches	1.24	3.46	1.21	3.48	0.19	3.90	0.58	2.12	5.79	8.27	3.46	2.78	36.48
Polmalse Gardens ..	J. M'Ardle, Esq.	..	..	220	Rain in Inches	1.77	4.31	1.52	3.87	0.30	4.96	0.88	2.14	7.11	9.76	4.24	2.99	43.85
Waterworks, Touch, No. 1	David H. Marrs, Esq.	8	..	455	Rain in Inches	2.13	5.16	1.99	4.58	0.46	6.53	1.07	2.44	7.63	11.03	5.19	3.58	51.78
Waterworks, Touch, No. 2	Do.	8	..	707	(Rain in Inches Days on which rain fell ..	2.01	4.99	1.80	4.30	0.41	6.71	1.15	2.00	7.09	9.93	4.96	3.50	49.54
Mingdock Reservoir ..	John Cochrane, Esq.	..	..	320	Rain in Inches	11	10	11	14	4	17	8	9	18	23	10	12	105
Blairfield	Do.	..	..	250	Rain in Inches	2.70	5.90	2.30	3.00	0.35	5.25	2.45	3.15	7.25	11.10	5.25	3.40	52.10
Head of Duchray Valley	Do.	..	..	1500	Rain in Inches	2.55	5.80	2.10	3.80	0.45	5.50	2.25	3.75	7.85	10.60	6.10	3.40	54.15
		..	..		Rain in Inches	4.50	12.10	3.65	0.30	0.55	8.90	3.50	5.20	11.80	18.30	6.80	4.85	86.45

Table I. shows the rainfall during the year at various stations throughout the County, the figures in each case having been very kindly supplied to me by the Observer, whose name is given in the second column of the table.

VITAL STATISTICS.

Population.—The Registrar General has estimated the population of the administrative County area, as at the middle of 1935, to be 110,350. This figure is inclusive of the populations of the small burghs of Grangemouth, Kilsyth, Denny and Dunipace, and Bridge of Allan. The estimate shows an increase on the previous years of only 243 persons, although the excess of births over deaths amounts to 729.

The last Census populations of the various parishes are given for purposes of reference, in Table II., which also gives for comparison the figures for the previous Census of 1921.

Table II.—POPULATION OF THE COUNTY OF STIRLING AS ASCERTAINED AT THE CENSUS OF 1931, WITH RELATIVE FIGURES FOR THE 1921 CENSUS.

PARISH	AREA IN ACRES			POPULATION					
				CENSUS 1921			CENSUS 1931		
	Total	Burghal	Land-ward	Total	Burghal	Land-ward	Total	Burghal	Land-ward
Denny ..	8,276	368	7,908	9,187	{ 5,130	5,871	{ 9,488	{ 5,512	5,744
Dunipace	5,593	112	5,481	1,814			{ 1,768		
Gargunnoch	9,862	..	9,862	586	..	586	570	..	570
Kilsyth ..	13,123	280	12,843	10,364	7,600	2,764	10,047	7,551	2,496
Klppen ..	11,268	..	11,268	1,518	..	1,518	1,356	..	1,356
Logie† ..	9,096	774	8,322	5,105	3,579	1,526	4,579	2,897	1,682
St. Ninians	37,543	..	37,543	14,812	..	14,812	14,757	..	14,757
Stirling ..	1,825	1,377	448	21,733	21,345	388	22,897	22,593	304
Airth ..	5,561	..	5,561	1,777	..	1,777	2,226	..	2,226
Falkirk *	15,111	4,035	11,076	42,762	33,308	9,454	45,443	36,565	8,878
Grangem'th*	8,046	2,736	5,310	18,708	9,723	8,985	20,682	11,798	8,884
Larbert ..	3,971	..	3,971	12,389	..	12,389	13,029	..	13,029
Muiravonside	7,964	..	7,964	5,758	..	5,758	5,560	..	5,560
Slamannan	10,856	..	10,856	3,409	..	3,409	2,959	..	2,959
Baldernock	4,320	..	4,320	763	..	763	674	..	674
Balfron ..	7,821	..	7,821	1,190	..	1,190	1,200	..	1,200
Buchanan	41,644	..	41,644	585	..	585	438	..	438
Campsie ..	17,860	..	17,860	5,335	..	5,335	5,296	..	5,296
Drymen ..	30,854	..	30,854	1,214	..	1,214	1,128	..	1,128
Fintry ..	13,788	..	13,788	381	..	381	281	..	281
Killlearn ..	15,375	..	15,375	1,054	..	1,054	908	..	908
Strathblane	9,085	..	9,085	1,275	..	1,275	1,161	..	1,161
Total	288,842	9,682	279,160	161,719	80,685	81,034	166,447	86,916	79,531

* The burghal and landward boundaries in these parishes have been altered since the 1921 Census.

† The reason for the apparent large decrease in the burghal population of Logie parish (Bridge of Allan) is that when the 1921 Census was taken the population of the burgh was inflated by a temporary military camp of 611 men.

Births and Birth-Rates.—The number of births actually registered within the County was 1699, but of these 43 were credited to other Local Authority Areas, and 373 births which took place in maternity homes and elsewhere outwith the County were transferred to Stirlingshire, the mothers' usual residence being there. The corrected number of births was therefore 2029, of which 1038 were of males and 991 of females, and the birth-rate works out at 18.4 per 1000 of population. The rate for the previous year was exactly the same. The Birth-rate for Scotland was 17.8 per 1000 in 1935.

Deaths and Death-Rates.—The number of deaths in the County area after correction for transfers was 1300, giving a death-rate of 11.8 per 1000 of population as compared with 11.7 in 1934, 12.1 in 1933, 12.4 in 1932, 11.2 in 1931 and 10.7 in 1930. For the whole of Scotland the death-rate in 1935 was 13.2 per 1000 of population.

The deaths from tuberculosis (all forms) numbered 61, giving a death-rate of 0.55 per 1000. Of these, 44 were due to tuberculosis of the respiratory system, the death-rate being 0.40, leaving a rate of 0.15 from all other forms of tuberculosis. The total death-rate from tuberculosis is slightly higher than the rates for the previous two years, but the death-rate of 0.15 from non-pulmonary tuberculosis is the lowest on record.

The number of deaths from the "Principal Epidemic Diseases" group was 84, with a death-rate of 0.76 per 1000. These deaths included 1 from typhoid fever, 3 from measles, 14 from scarlet fever, 8 from whooping cough, 26 from diphtheria, 22 from influenza, 2 from cerebro-spinal fever, and 8 from other epidemic diseases.

The number of deaths of infants under one year of age was 145, giving an infant mortality rate of 71 per 1000 births. This rate is exactly similar to that of 1934. The rate for Scotland was 76.8 per 1000 births and is the lowest yet recorded for the Country as a whole.

The following is a brief note of the births and deaths recorded in the County area for the past six years:—

Year.	Births.	Birth-rates.	Deaths.	Death-rates.
1930	2157	19.3	1196	10.7
1931	2118	19.8	1201	11.2
1932	2160	20.0	1346	12.4
1933	1970	18.0	1325	12.1
1934	2028	18.4	1288	11.7
1935	2029	18.4	1300	11.8

Tables III. and IV. give detailed figures with regard to Births, Marriages, and Deaths, the former table being for the County area, and the latter, for the small burghs of Grange-mouth, Kilsyth, Denny, and Bridge of Allan, and also the landward part of the County.

Table III.—VITAL STATISTICS, SHOWING THE BIRTHS, MARRIAGES, AND DEATHS FOR THE YEAR 1935, IN THE COUNTY OF STIRLING (EXCLUDING THE BURGH OF STIRLING AND FALKIRK).

	No. Registered in District	Transfers				Corrected No.			Rate per 1000 of Est. Pop. (Both Sexes)
		Out		In		Both Sexes	Males	Females	
		M	F	M	F				
Births (including Illegitimate)	1699	31	12	188	185	2029	1038	991	18.4
” Illegitimate	86	3	1	33	21	136	80	56	*6.7
Marriages	676	..	..	..	..	..	..	..	6.1
Deaths—All Causes	1101	141	..	340	..	1300	683	617	†11.8
Tuberculosis (All Forms)	..	..	..	..	..	61	30	31	0.55
” (Respiratory System)	..	..	..	..	..	44	22	22	0.40
Principal Epidemic Dis. (Nos. 1-18 of International List)	..	..	..	..	..	84	35	49	0.76
Children aged under One Year	..	..	..	..	..	145	90	55	†71

* Rate per 100 Births.

† Rate per 1000 Births.

‡ Rate adjusted for Age and Sex Distribution = 12.7.

CAUSES OF DEATH.

CAUSES OF DEATH.	ALL AGES	AGES.											
		-1	1--	5--	10--	15--	25--	35--	45--	55--	65--	75--	85 and over
		Y	X	0	1	2	3	4	5	6	7	8	9
Typhoid fever (including Paratyphoid)	.. M.	1	..	..	..	..	..	1	..	..	..	..	..
	.. F.	..	..	..	..	..	..	..	..	..	..	..	..
Measles ..	.. M.	..	..	..	1	..	..	..	..	..	..	..	..
	.. F.	2	1	..	..	..	..	..	..	..	..	..	..
Scarlet fever ..	.. M.	2	2	..	..	..	..	..	..	..	..	..	..
	.. F.	12	6	3	1	1	1	..	..	..	..	..	..
Whooping-cough	.. M.	5	3	..	..	..	..	..	..	..	..	..	..
	.. F.	3	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	.. M.	12	5	2	3	..	..	..	..	..	..	..	..
	.. F.	14	6	6	2	..	..	..	..	..	..	..	..
Influenza ..	.. M.	8	1	..	..	1	..	..	..	2	2	1	..
	.. F.	14	..	..	..	1	..	1	..	2	1	6	3
Cerebro-spinal fever ..	.. M.	..	..	..	..	..	..	..	..	..	..	..	..
	.. F.	2	1	..	1	..	..	..	..	..	..	..	..
Other epidemic diseases*	.. M.	6	1	..	..	..	..	1	1	2	..	..	..
	.. F.	2	..	..	..	..	..	..	1	1	..	..	..
Tuberculosis of respiratory system ..	.. M.	22	1	..	..	2	4	..	6	1	2	..	..
	.. F.	22	..	..	..	5	6	4	8	1	1	..	..
Other tuberculous diseases ..	.. M.	8	1	..	..	1	1	..	1	..	..	..	..
	.. F.	9	3	..	..	3	1	..	1	1	..	..	..
Other infectious and parasitic diseases	.. M.	2	1	..	..	..	..	..	..	..	..	..	..
	.. F.	6	2	..	..	1	2	..	..	..	..	1	..
Cancer, malignant disease ..	.. M.	79	..	..	..	1	2	..	..	..	..	1	..
	.. F.	79	..	..	..	1	2	4	4	23	28	17	..
			..	..	..	..	3	2	16	17	28	13	1

* Including typhus fever, smallpox, dysentery, erysipelas, acute poliomyelitis, and tetanagic encephalitis.

CAUSES OF DEATH—continued.

CAUSES OF DEATH.	ALL AGES	AGES.											
		—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	85 and over
		Y	X	0	1	2	3	4	5	6	7	8	9
Puerperal sepsis	M.	..	..	..	..	..	..	..	..	..	..	..	..
	F.	10	..	..	..	2	5	3	..	..	..	..	..
Other puerperal causes.. ..	M.	..	..	..	..	..	..	..	..	..	..	..	..
	F.	7	..	..	..	1	5	1	..	..	..	..	..
Diseases of skin and locomotor system	M.	11	2	2	1	..	..	1	..	2	1	1	..
	F.	5	..	..	..	1	..	..	2	1	..	..	..
Congenital debility, premature birth, malformations, M.	44	43	..	..	..	1	..	..	..	..	..	..	..
&c.	F.	26	1	..	..	..	..	..	..	..	3	21	12
Old Age	M.	36	..	..	..	..	..	..	..	..	4	20	9
	F.	33	..	..	..	..	..	..	..	..	..	1	..
Suicide	M.	6	..	..	..	2	..	1	1	1	..	..	..
	F.	2	..	..	..	1	..	..	1	..	..	..	..
Other violence	M.	43	5	5	1	7	7	7	1	5	5	1	..
	F.	17	..	4	4	2	..	1	1	3	3	2	..
Causes ill-defined or unknown	M.	6	..	1	..	..	..	..	1	4	..	..	..
	F.	5	..	..	..	..	..	..	1	2	1	..	1
ALL CAUSES	M.	90	36	15	10	24	33	43	45	100	163	110	24
	F.	617	20	18	15	30	31	29	55	82	134	110	23
BOTH SEXES	1300	145	62	33	25	54	64	72	100	182	287	220	47

Table IV.—VITAL STATISTICS, YEAR 1935, FOR THE SMALL BURGHS IN THE COUNTY AND FOR THE LANDWARD AREA.

	STIRLING COUNTY				
	Bridge of Allan Burgh	Denny & Dunipace Burgh	Grangemouth Burgh	Kilsyth Burgh	Landward
Population (Estimated)	2903	5751	12,644	8281	80,771
Total Births Registered (including Illegitimate)	29	93	144	137	1296
" Corrected (")	31	108	208	176	1506
" " Male	16	55	106	80	781
" " Female	15	53	102	96	725
" " Illegitimate .. .. .	..	10	7	9	110
Marriages Registered	14	44	88	58	472
Deaths Registered	25	55	104	52	865
" Corrected	37	73	139	87	964
" " Male	16	34	67	46	520
" " Female	21	39	72	41	444

CAUSES OF DEATH

Typhoid fever (Including Paratyphoid) ..	..	..	..	..	1
Measles .. .. .	..	1	..	..	2
Scarlet fever	2	1	3	1	7
Whooping-cough .. .. .	..	2	..	2	4
Diphtheria .. .. .	..	3	4	5	14
Influenza .. .. .	..	..	4	1	17
Cerebro-spinal fever .. .. .	..	..	..	..	2
Other epidemic diseases * .. .. .	..	..	..	1	7
Tuberculosis of respiratory system .. ..	..	6	4	1	33
Other tuberculous diseases .. .. .	..	1	4	..	12
Other infectious and parasitic diseases ..	..	..	..	..	8
Cancer, malignant disease	5	9	16	12	116
Diabetes mellitus .. .. .	..	1	4	1	11
Other general dis., chronic poisonings ..	2	1	2	2	26
Cerebral hæmorrhage, &c.	3	7	10	3	79
Other dis. of nervous system and sense org...	..	2	4	5	23
Heart disease	5	5	23	18	178
Other circulatory diseases	4	1	1	3	21
Bronchitis .. .. .	..	5	12	5	39
Pneumonia (all forms) .. .. .	..	10	8	5	71
Other respiratory diseases	1	3	1	..	17
Gastric and duodenal ulcer .. .. .	..	1	..	..	5
Diarrhœa, &c. (all ages) .. .. .	..	1	4	..	16
Appendicitis	1	..	3	1	7
Cirrhosis of liver .. .. .	..	..	..	..	1
Other diseases of liver, &c. .. .. .	..	..	..	..	3

*Including typhus fever, smallpox, dysentery, crystalas, acute poliomyelitis, and lethargic encephalitis.

CAUSES OF DEATH—continued.

	STEELE COUNTY				
	Bridge of Allan B	Denny & Dunipace B	Grangemouth B	Kilsyth B	Landward
Other digestive diseases	1	1	1	3	17
Acute and chronic nephritis .. ..	..	2	4	..	17
Other dis. of gen ^l to-urinary system ..	..	1	4	1	20
Puerperal sepsis .. .. .	..	..	1	1	8
Other puerperal Causes .. .. .	..	..	..	1	6
Diseases of skin and locomotor system ..	1	..	1	1	13
Congen. debil. prem. birth, malform., &c. ..	1	2	5	5	58
Old age	8	1	9	3	48
Suicide	1	..	1	2	4
Other violence	2	3	6	3	46
Causes ill-defined or unknown .. ..	..	3	..	1	7
ALL CAUSES	37	73	139	87	964

AGES AT DEATH

Under 1.. .. .	1	5	11	12	116
1-4	1	6	10	10	35
5-9 .. .. .	..	2	5	1	25
10-14 .. .. .	..	2	3	2	18
15-24	2	3	5	3	41
25-34	2	4	6	6	46
35-44	2	3	8	9	50
45-54	3	8	9	3	77
55-64	4	12	22	14	130
65-74	6	13	24	17	227
75-84	11	14	32	10	162
85 and over	5	1	4	..	37
Not stated .. .. .	..	..	..	..	..
ALL AGES	37	73	139	87	964

II.—GENERAL SANITATION.

(1) SPECIAL DISTRICTS.

The following is a note of the various Special Districts throughout the County, showing the Services carried out in each:—

Central Area.

- Bannockburn and Whins of Milton—Drainage, Scavenging, and Lighting.
- Cambusbarron—Water, Drainage, Scavenging, and Lighting.
- Park Place—Drainage, and Scavenging.
- Cambuskenneth—Lighting.
- Cowie—Drainage, Scavenging, and Lighting.
- Fallin—Lighting.
- Causewayhead—Water, Drainage, Scavenging, and Lighting.
- Buchlyvie—Drainage, Scavenging, and Lighting.
- Kippen—Water, Drainage, and Lighting.
- Gargunnoch—Water.
- Bonnybridge—Drainage, Scavenging, and Lighting.
- Dennyloanhead—Drainage, Scavenging, and Lighting.
- Plean—Drainage, Scavenging, and Lighting.
- Stoneywood and Fankerton—Drainage.
- Banton—Water, Drainage, and Lighting.
- Queenzieburn—Lighting.

Eastern Area.

- Airth—Drainage, Lighting, Scavenging.
- Avonbridge—Drainage, Lighting, Scavenging.
- California—Drainage, Scavenging.
- Larbert—Drainage, Lighting, Scavenging.
- Lauriston—Drainage, Lighting, Scavenging.
- Limerigg—Drainage.
- Maddiston—Drainage, Lighting, Scavenging.
- Polmont and Redding—Drainage, Lighting, Scavenging.
- Rumford—Drainage, Lighting, Scavenging.
- Shieldhill—Drainage, Scavenging.
- Slamannan—Drainage, Lighting, Scavenging.
- Whitecross—Drainage, Lighting, Scavenging.
- Glen Village—Lighting, Scavenging.

Western Area.

- Balfron—Water, Drainage, Lighting, Scavenging.
- Balmore and Torrance—Water.
- Torrance—Drainage and Lighting.

Campsie Glen—Water.
 Drymen—Water, Drainage.
 Edenkiln—Water.
 Fintry—Water.
 Killearn—Water, Drainage, Lighting, Scavenging.
 Lennoxtown—Water, Drainage, Lighting, Scavenging.
 Milton of Campsie—Water, Drainage, Lighting.
 Netherton—Water.
 Strathblane—Lighting, Scavenging.

(2) WATER SUPPLY.

It will be remembered that the year 1933 had a particularly long dry season, and the year, 1934, in that respect was not much better. During these years consequently the water supplies of the Stirlingshire & Falkirk Water Board became so low as to cause the Board much anxiety, and the result has been that a very comprehensive scheme was entered upon to add to their existing resources. The gathering ground for the new scheme will comprise the upper water-shed of the Carron and its tributaries, in addition to Loch Coulter and its gathering ground. A large reservoir fully three miles in length is being constructed by damming the upper waters of the Carron, and the cost of the whole scheme will be in the neighbourhood of £300,000.

The first sod in connection with this huge undertaking was cut at Craiganet, Carronbridge, on the 30th September, by Mrs. David Paul, wife of the Chairman of the Board.

The capacity of the reservoir will be 4,000,000,000 gallons of water, giving an average daily supply in dry years of 17,500,000 gallons. It is expected that the work will take about three years to complete.

Mr. David Ronald, chief engineer of the Department of Health for Scotland, who was present at the ceremony, said he saw no reason why the water supplies of industrial Scotland should not be linked together.

He had long had such a plan in his mind, and on his recommendation, provision had been made in the new Kincardine road bridge for the reception of a water pipe, if it should become necessary.

The ideal arrangement would be to have one or two very large reservoirs to supply water to the linked-up mains, thereby dispensing with the further construction of small local reservoirs.

He contemplated new reservoirs of the nature and extent of the one they had commenced that day.

That reservoir was ideal for such a purpose in respect of its location, and it was what one might call "two-faced." One face could deliver water to Stirlingshire and the East

and the other to Dumbartonshire and the Loch Lomond areas in the West, by which means the water could be used to augment the supply of almost any part of industrial Scotland.

AREAS OUTWITH THE STIRLINGSHIRE & FALKIRK WATER BOARD'S AREA.

Quoting excerpts from the Sanitary Inspector's Reports—Mr. Sinclair writes with regard to Buchlyvie : "Some time in the near future it will be necessary to increase the storage capacity or to build a small reservoir to ensure that there will be no shortage during droughts. There has been no shortage so far, but there is an increasing demand every year for water, particularly in connection with the installation of modern sanitary conveniences, and as it is estimated that the capacity of the existing Storage Tank only gives one half day's supply, the need for additional storage can readily be seen."

Concerning the supply to Kelvinhead, by Kilsyth, Mr. Goldie reports that "In view of the fact that several of the occupiers of property at Kelvinhead find their own supply at times unsatisfactory, tenders were taken for laying a new water main to these houses from the existing 2 inch. pipe supplying the Kelvinhead Housing Scheme, and the work has been commenced."

For the Western area where there are quite a number of Special Water Districts, Mr. Stewart reports as follows:—

"FINTRY.—The position in this district is unchanged, the water supply proving adequate. At the close of the year there was a sudden stop of the supply to the village and it was found that there was no water entering the storage tank, although there was a copious supply at the fountainhead. It was necessary to break the 4 inch fireclay pipes, which were cement jointed, for a distance of seven yards and remove a rope-like formation of fibrous root growth which had filled the bore of these pipes. Steps will be taken to have the roots of shrubs, trees and bushes which grow alongside the pipe track, cut regularly in future to prevent such a happening recurring.

"HAUGHHEAD.—The quantity of water supplied to this area has proved to be totally inadequate, due to the advanced state of corrosion of the pipeline which has been in existence for the past fifty or sixty years. The position was so acute that I reported the conditions to the local Group Committee suggesting that they recommend to the Public Health Committee, that a special water district be formed for this area so soon as the involved procedure controlling the formation of such districts would permit. This was agreed to.

“MILTON.—This village has a good supply of water at the fountainhead and also a fair amount of storage available in the reservoir. Notwithstanding that happy position, the Local Group Committee have been persuaded to recommend to the Public Health Committee that an adjacent reservoir one time used by the Calico Printing Association when they had works at Kincaidfield, should be purchased and made available for the special water district. Negotiations in respect of this are in progress.

“In a general way both public and private supplies have been well maintained although the Water Superintendents of the special districts have not had their worries to seek during the severe frosts. No doubt accounts will be much larger in those areas where water is supplied through meter from Glasgow Water Conduits.”

WATER ANALYSES.

In all fifteen samples of water were taken during the year for Chemical Analyses with a view to ascertaining fitness for domestic use. Table V. gives details of the samples taken with a note of the Analysts' figures.

Nos. 1 and 2 were taken as a result of complaints received of illness. Analysis showed however that the water was not to blame.

No. 3 was from dip well at Dennyloanhead. It was found slightly polluted and the supply was discontinued.

No. 4 from Northfield Farm, Denny, was found quite suitable.

Sample No. 5 was taken from a circular-built stone well at Bellsdyke, Bothkennar. The sample was found polluted. The house supplied from the well in question has now been scheduled for closure.

No. 6 from a drinking fountain in Laurieston Public Park. The chemical composition of the water was excellent, although there was a faint tarry odour. The sample was specially tested for constituents of tar, such as phenols (of which one part per million can be detected), but none was found. The analysts were of opinion that there is nothing in this water of an injurious nature.

Samples 7, 9, 12, 13, 14, and 15 all gave good results.

Sample No. 8 from North Lodge, Ballindalloch, was found contaminated, and the owner immediately took steps to have a supply laid on from the Glasgow Corporation Supply.

No. 10 from Spring at Glenfoot Poultry Farm, Balfron, from a chemical point of view was considered not suitable for drinking and dietetic purposes.

Table V.—WATER ANALYSES (IN GRAINS PER GALLON), 1935.

No.	Date of Report.	Where Taken.	Mineral Matter.	Organic Matter.	Total Solids.	Nitrates.	Free Ammonia.	Albuminoid Ammonia.	Total Ammonia.	Temporary Hardness.	Permanent Hardness.	Total Hardness.	Colour (Loch Katrine Water=10).	Degree of Sewage Contamination.*
1	22/8/35	Tough House, near Stirling (Stirling Supply)	3.80	.80	4.60	—	.001	.007	.003	1.49	.59	2.08	17	—
2	28/8/35	do. (Private Gravitation Supply)	4.60	.10	4.70	—	.002	.004	.006	1.96	.87	2.82	—	—
3	31/1/35	Dip well, The Hut, Dennyloanhead	10.10	.30	10.40	.54	.001	.004	.005	2.41	4.62	7.03	—	1 to 90
4	31/1/35	Kitchen tap, Northfield Farm, Denny	4.82	.28	5.10	.12	—	.005	.005	2.03	1.15	3.18	—	—
5	5/8/35	Stone well, Bellsdyke, Bothkennar	13.40	.50	13.90	—	.022	.010	.032	7.49	1.47	8.96	8	1 to 226
6	10/9/35	Drinking fountain, Public Park, Laureston	3.84	.86	4.70	—	.001	.009	.010	.68	1.70	2.38	20	—
7	26/2/35	Hillside Burn, Campsie Parish	5.32	.46	5.78	tr.	—	.006	.006	1.75	1.71	3.46	8	—
8	15/4/35	North Lodge, Ballindalloch, Balfour	4.15	.48	4.63	.59	.001	.005	.006	1.02	1.60	2.62	8	1 to 42
9	11/5/35	Spring, Baldernock Parish	32.04	.35	32.39	—	.002	.004	.006	17.46	10.37	27.83	—	—
10	22/5/35	Glenfoot Poultry Farm, Balfour	10.35	.45	10.80	.84	.001	.005	.006	6.43	1.02	7.45	5	1 to 28
11	31/5/35	Glenfoot Farm, Balfour	13.50	.30	13.80	1.75	.001	.006	.007	6.94	2.37	9.31	—	1 to 14
12	5/8/35	Tap, Private Supply, Buchanan Parish	6.4	.1	6.5	—	.001	.003	.004	2.87	.73	3.60	—	0
13	21/9/35	Rowardennan Lodge, Buchanan Parish	1.96	.72	2.68	—	.002	.003	.010	—	1.02	1.02	15	0
14	20/12/35	Entrance to Loch Ardunning, Strathblane	6.02	.50	6.52	—	—	.005	.005	2.30	2.11	4.41	10	0
15	20/12/35	Exit from Loch Ardunning, Strathblane	3.70	.68	4.38	—	—	.007	.007	.82	1.20	2.02	14	0

* Note.—Messrs. Tatlock & Thomson's regular method of stating their opinion of a water as to sewage contamination is as follows:—"It may be regarded as being equal to a mixture of one part of average sewage with . . . parts of pure water which had been filtered through earth till clear." The figures in the last column of the table give the result according to this method.

No. 11 from another source at Glen Foot Farms, was found unfit for human consumption but was considered quite suitable for farm stock, and is being used for that purpose.

(3) DRAINAGE, SEWAGE PURIFICATION AND DISPOSAL.

As usual, a great amount of work had to be attended to by the Sanitary Inspectors, in supervising the drainage of new houses, the replacing of damaged frames and covers at sewer manholes, and in the general maintenance and supervision of the sewers and sewage disposal works throughout the County.

The sanitary inspector for the Northern part of the Central Area, Mr. Sinclair, in his Annual Report writes:—

“Bannockburn and Whins of Milton.—The following extensions were made to the District during the year.

- (1) To include the New R. C. School at Balquhiddelock and also a field adjoining which is intended for housing development.
- (2) To include the extension of the Bannockburn Hospital.
- (3) To include new Police houses at Whins of Milton.

“A new 6 inch sewer was laid at McLaren Terrace to suit housing development there. This sewer discharges into the Burgh Sewer.

“Specifications were prepared and offers taken for a new 9 inch Sewer from the New Road past Balquhiddelock Farm to the new R.C. School, and to provide drainage facilities for a proposed housing scheme adjoining the School site. The work was commenced towards the end of the year.

“Gargunnock.—The Village of Gargunnock is the only one in this area which has not a satisfactory drainage system. The lack of drainage facilities retards progress being made in the provision of modern sanitary conveniences, and this, together with the unsightliness of and sometimes nuisance caused by the drainage running down the Main Street in an open channel, calls for improvement which can only be effected by the provision of proper drainage. Two years ago this matter was under consideration and it was then estimated that the scheme suggested would involve a rate of 6/- per £. The cost was, therefore, prohibitive, and I doubt will continue to be so unless assistance is given to the Local Ratepayers by Government Grant or other means.”

Mr. Goldie, sanitary inspector for the Southern part of the Central Area reports as follows:—

“**Bonnybridge.**—The sewer westward along the Bonnybridge Road at Dennyloanhead has for some time been subject to frequent siltage, thought to be caused by mineral workings in the locality. A report from the County Architect as to the cost of laying a new sewer was obtained. As an alternative to this, and having regard to the heavy capital expenditure involved in laying a new sewer, he suggested that an extra flushing tank should be installed. The Sub-Committee approved of the installation of an extra flushing tank and agreed to recommend that the sewer should be flushed once per day to begin with.

“**Stoneywood and Fankerton.**—This new drainage system has enabled owners to make sanitary improvements at houses in the District. This work continues to be done, and as matters now stand all the drainage connections from premises in the district, except one, have been made.”

With regard to the Eastern Area, Mr. Gough, reporting on the Southern part of the district writes :

“The Village of California was formed into a Special Drainage District during the year, and at the end of the year, there were ten Special Drainage Districts in the area, viz.:—Avonbridge, Bonnybridge (High), California, Limerigg, Maddiston, Polmont and Redding, Rumford, Shieldhill, Slamannan, and Whitecross. No extensions were made to the boundaries of existing Special Districts during the year.

“Important drainage developments were put into operation during the year. When it was made known at the beginning of the year that the Commissioner for Special Areas in Scotland was prepared to consider applications for grants for drainage works, the Special District Committees in the district submitted the following schemes for his consideration, viz.:—

1. Drainage Scheme and Sewage Disposal Works for the Village of California at an estimated cost of £3,800.
2. Drainage Scheme and Sewage Disposal Works for Hamlets of High and Low Limerigg at an estimated cost of £1,186.
3. Reconstruction of Northfoot Sewage Disposal Works and provision of filters at an estimated cost of £7,000.
4. Extension of Redding (East End) Sewage Disposal Works and new outfall sewer at an estimated cost of £4,100.
5. Provision of Filters, Humus Tanks, etc. at Whitecross Sewage Disposal Works at an estimated cost of £1,400.

These applications received favourable consideration from the Commissioner who intimated that he was prepared to allow the schemes to rank for a grant of thirty-three and a third per cent of the estimated cost provided the County Council and District Committees each contributed thirty-three and a third per cent. of the estimated cost. The County Council and District Committees agreed to the Commissioner's terms, and in October work was commenced on all schemes. None of the schemes were completed by the end of the year.

"The completion of these schemes will see every village in the district provided with an efficient system of sewers and modern Sewage Disposal Works.

"The Sewers and Sewage Disposal Works throughout the district were well maintained and gave no cause for complaint."

Reporting on the Northern Division of the Eastern Area, Mr. Macfarlane writes:—

"Larbert Special Drainage District.—Since the local authority constructed the sewer in Stirling Road, Larbert, the ground, especially on the east side of the road is being rapidly taken up for the erection of self-contained and semi-detached bungalows. A notable alteration was effected on the internal drainage system, in Larbert area, by the construction of a new 9 inch main sewer from Main Street via Dundarroch Street, so as to connect with the 12 inch main sewer in Falkirk Road. The pressure on the existing sewer in Main Street, Larbert, was thereby relieved, and the laying of the new sewer through Dundarroch Street, involved a deep cutting. The construction of this new sewer involved the laying of 340 yards of spigot and faucet fireclay pipes, and the formation of 7 manholes, and the contract was completed in a very efficient manner by the month of March.

"In the month of September, the Committee had under consideration an application to extend the existing sewer in Carronvale Road, Larbert, in order to provide drainage facilities for a further private building development there. There being no alternative, the local committee decided to extend the sewer at the appropriate time.

"In the month of July, a complaint was intimated by the Falkirk Burgh Engineer, to the effect that there was serious infiltration of sub-soil water into the Blackmill sewer as a result of which the pumps at Carronside Pumping Station were being overtaxed. As was the case when a previous complaint was made as to alleged "offal" coming from the Larbert district entering the Dalderse Sewage Works this complaint could not be substantiated, as investigations

proved that the trouble actually originated at the Pumping Station itself by reason of the fact that one of the pumps had not been functioning properly. It was necessary to provide a new sludge pump for the detritus tank on Carronshore system.

"As has been previously reported, the bulk of the drainage from the district is now conveyed by a high level concentration sewer to Dalderse Sewage Works which are under the control of Falkirk Town Council. The Larbert Committee accordingly considered the condition of Cobblebrae Works, and gave instructions that Messrs. Warren and Partners, Civil Engineers, Glasgow, should report as to the future use of same. In their report the Engineers stated that the Works served a population from the County and Falkirk Burgh still draining into the low level sewer. The estimated average daily flow to the works was given as 260,000 gallons in dry weather, viz.: 120,000 gallons from the County area and 140,000 gallons from the Burgh area. The Engineers also expressed the view that a good proportion of sewage from the Burgh and County area could be diverted into the high level concentration sewer of the joint drainage scheme, and thereby reduce the cost of pumping at Carronside Pumping Station. The engineers advised that Cobblebrae Works should now be scrapped, and that an efficient screening chamber of about 56,000 gallons capacity be constructed in order to screen the sewage before discharge into the pumping station above referred to, the estimated cost being given as £2,000.

"After careful consideration, the Larbert Committee decided to refer the matter to the Joint Drainage Works Committee to carry out the suggestion of the engineers, and, on the understanding that the cost would rank as a charge against the Joint Drainage Scheme.

"Bonnybridge Special District.—In marked contrast to the previous year, the system was remarkably clear of stoppages.

"The Sewage Disposal Works for the district were subject to weekly inspection, and every effort maintained to send a satisfactory effluent into the River Bonny. Owing to the Works being incapable of fully treating the volume of sewage entering the Works, this is difficult to accomplish on account of the lack of sufficient filtering area. It would now appear that it may be better to await the report of the Scottish Advisory Committee on Rivers Pollution Prevention, as regards the River Carron and the River Bonny, before embarking on any scheme of enlargement. The Grit Chambers at the Outfall Works were cleaned out daily, and as opportunity arose, the dried sludge was carted away by a local farmer for top dressing purposes."

“Areas Other than Special Districts.—In the Non-Special Drainage Districts comprising Allandale, Glen Village, Letham, and South Alloa, the sewage is subjected to treatment in Septic Tanks, which give fairly satisfactory results.

“In the case of Longdyke Village (which is not water-closeted) partial purification is carried out by means of a Settling Tank.

“The same conditions prevail in Skinflats Village, as stated in the report for 1934, i.e.: the drainage from the four Blocks of County Council Houses, known as Campy Terrace, is purified by means of a large Septic Tank, while the sewage from the remaining properties is conveyed by a private sewer to the tidal waters of the River Carron below Glensburgh.

“Towards the end of the year, it was necessary to make arrangements for the Septic Tanks which purify the drainage from the County Council Housing Scheme at Glen Village being emptied. There are now 52 houses in this scheme, and as the Glen Burn, which receives the septic tank effluent, is sometimes low, thereby affording little degree of dilution in dry weather, the Local Authority may be faced with the necessity of having to form a special drainage district, and provide more efficient sewage purification works.”

For the Western Area, Mr. Stewart writes:—

“The individual drainage systems with the principle of a septic tank having their effluents discharge into field drains, ditches, and streams, remain the same as in previous years and certain villages cannot long delay the problem and financial burden of satisfactory drainage disposal.

“One village is again considering the formation of a Special Drainage District; but so far nothing definite is decided. In connection with the development of small holdings by the Department of Agriculture in an area away from the public services, drainage is to be disposed of by a septic tank for each house with the effluent linked up to a field drain.

“Lennoxton.—The Sewage works for this Special Drainage District consist of settling tanks and the effluent discharges into the River Glazert. During the dry season, when the river was low, complaints were received as to the pollution of the river, alleging that the water was unfit for cattle drinking. Fortunately rain came and remedied matters.”

Speaking in a general way the systems functioned throughout the year in a satisfactory manner.

RIVERS POLLUTION.

In the latter part of the year the Scottish Advisory Committee on Rivers Pollution Prevention held an Inquiry into the pollution of the River Carron, and in my evidence I stated :—

“The course of the Carron lies within the County of Stirling, rising very near the headwaters of the Endrick, which flows westwards to Loch Lomond, while the Carron flows in an easterly direction and discharges its waters into the Forth at Grangemouth. Its length as the crow flies measures a little over twenty miles.

“The Bonny Water also lies wholly within the County of Stirling, rising near the headwaters of the Kelvin which flows westwards to the Clyde, while the Bonny flows eastwards to join the Carron almost two miles east of Denny.

“The River Carron is so situated as to be liable to pollution from Paper Mills and Sewage. There used to be a number of coal pits, but these appear to be worked out with two exceptions, namely (1) *Herbertshire Colliery*, less than a mile east of Denny Railway Station, and at which the coal washer is now in use for only three hours per week, during which time the number of gallons of waste water produced is about nine hundred. This is put into settling ponds, and the solids from these are burned in the colliery boiler fires. The clear effluent from the settling ponds is discharged with the pit water into the Cuthelton Burn, which joins the Carron at Headswood. There has never been any cause of complaint. (2) *Carronhall Colliery (William Pit)*, in Grangemouth Parish. This is a small colliery, at which a very little coal-washing is done, but there has never been any complaint as to the effluent, which discharges into an open carse ditch, and ultimately reaches the River Carron via Skinflats.

“The Bonny is liable to pollution from Sewage, but in former years there were complaints from time to time about pollution from the Banknock Livingstone Pit, and from the Bankier Distillery. Coal-washing was done at the pit and occasionally the settling ponds did not receive sufficient attention, and, as a result of the neglect, the Bonny became polluted with coal washings. It was never shown that the coal washings had any serious effect on fish life.

“It was very different, however, with the Distillery pollution. The settling ponds for the spent ale were situated along the north side of the Bonny, and from these the spent ale was meant to filter or percolate into the stream. On occasion the spent ale reached the stream more quickly, and in greater quantity than the water could properly assimilate, with the result that the organic ingredients of

the ale used up so much of the oxygen dissolved in the water that the fish were really asphyxiated.

"Both the pit and the distillery have been closed for years.

"The principal works other than those mentioned in the watershed of the Carron and the Bonny are (a) Brick Works, from which no pollution is caused, (b) Iron Works or Foundries from which there is no pollution, and (c) Gas Works, the effluents from all of which are piped to the public sewers, and so pass into sewage purification works where they are dealt with.

"Ever since the County Public Health Department was formed, the question of the pollution of the Carron and of the Bonny has been receiving attention.

"In the very first annual report (that is for 1891) of my predecessor, Dr. J. C. McVail, mention is made of the subject. Speaking of the pollution of the Carron the report goes on to say 'The question is largely bound up with that of the formation of a Special Drainage District for Larbert, Stenhousemuir, Camelon, Carron, and Carronshore, all which, as well as some chemical works, drain into the River.' In some respects therefore the condition of the Carron must have been a good deal worse then than now.

"In the annual report of 1892, specific mention is made of the pollution from the paper works in the Central District, with special reference to the boiling of the esparto grass with caustic soda, and to the resultant alkaline and soapy effluents which were being discharged into the Carron, often causing the water to be covered with a white foam from bank to bank.

"The report for 1893 mentions Carrongrove, Herbertshire, and Stoneywood, which discharge their effluents into the Carron, and it also mentions the Bonnybridge Paper Works which discharged into the Bonny. It may be said that the Bonnybridge Works have been closed for many years.

"The 1893 report also notes the installation of soda recovery plant at Carrongrove. There are now in use two incinerators or "roasters" as they are called, and it is claimed that as much as 94 per cent. of the caustic soda is actually recovered for future use.

"In the annual report for 1894, a great improvement was noted, due to the successful working of the incinerators, etc., but the effluent was not yet considered satisfactory.

"A description of the soda-recovery process is given in my annual report for 1912, and the process is now well known. At Carrongrove it was found that the "Roasters" developed a temperature of 1300° to 1400°F. This heat can be used for steam-raising and results in a weekly saving of seventy to eighty tons of coal.

"The working of the soda recovery plant therefore results in a financial profit.

"The annual report of 1895 notes a further considerable improvement in the condition of the Carron.

"The 1896 report records that a number of fish had been killed in the Bonny by suspected poachers using caustic lime.

"The 1897 report records that the Carrongrove incinerator plant had been renewed and modernised, and the 1898 report talks of pollution of the Bonny from Oswald and Hall's Paper Works.

"In 1899 complaint is made that the effluent from the filter beds at Carrongrove Works was worse than at the intake, indicating that the filter beds were not receiving proper attention.

"And so it has been throughout the years—the condition of the Carron and of the Bonny has been kept before the County Council, the condition of neither ever reaching a thoroughly satisfactory state. While in both streams there has been enormous improvements in respect of sewage pollution the pollution from the paper mills still remains very objectionable, although it must be said that the grey slimy glut that used to cover the bed and stones of the Carron has disappeared for a good many years. It is probable also that the installation of Fullner recovery tanks at Carrongrove and the Vale Paper Works has furthered this cleansing process.

"Carrongrove is the principal offender, not only because it is by far the largest, but also because esparto grass is the chief raw material used. There are four paper machines working, in addition to a 'surfacing' machine which was erected some years ago. These cause a certain continuous pollution. Again, from the soda-recovery process there is left a large amount of material, chiefly CaCo_3 , which is dumped on the south bank of the Carron adjacent to the dump for the ashes above the paper mill, and in such a position that the whole refuse is gradually washed away during floods.

"The Public Health Department have also raised the question of pollution from the 'Surfacing' operations.

"At Stoneywood Paper Works the materials in use for paper making are *wood pulp*, *waste paper*, and *rags*. There are three rag boilers, and about two tons of rags are used weekly. In the process of boiling the rags about two and a half cwts. of caustic soda are used per week, for which there is no recovery plant. A considerable quantity of bleach as chloride of lime is used, and the solids from the bleach settling tanks are carted to the ash coup.

"At the Vale Paper Works in the Burgh of Denny, and at the Denny Paper Works, at Headswood, no esparto grass is used, the raw materials being waste paper and wood pulp. No caustic soda and no bleach are used, and therefore any pollution is of a less serious nature.

"The pollution of the Carron is now therefore largely a question of pollution arising from the paper mill industries established on its banks. The water above the mills has the characteristics of an upland water supply.

"The uppermost populous places on its banks are the two small villages of Fankerton and Stoneywood which were combined to form a Special Drainage District, the sewers of which now empty into the Denny Burgh Sewers, the sewage being treated at the Denny Burgh Sewage Works.

"Until recent years the sewage from the greater part of Larbert Parish was treated by works of a sort at Cobblebrae and Carronshore. The whole arrangement was most unsatisfactory.

"The arrangement with regard to the Burgh of Falkirk was even worse, as the Burgh sewage, which was untreated, was simply discharged into the Carron.

"In these circumstances therefore a most desirable agreement was comparatively recently formed between Falkirk Burgh and Larbert Special Drainage District, in accordance with which extensive and up-to-date works were erected at Dalderse, where the combined sewage is treated.

"The sewers of the Special Drainage District of Laurieston are connected up with the Grangemouth Burgh Sewers, and the combined sewage is discharged untreated through the Burgh sewers into the Carron.

"In Skinflats, which is not a Special Drainage District, the sewage from sixteen houses forming Campy Terrace, recently erected by the County Council, is purified by means of a septic tank, specially constructed for this development. The effluent is discharged into a deep carse ditch with a good flow behind Campy Terrace. In all other cases the sewage is conveyed to a private sewer in the public highway, which ultimately discharges into the River Carron. Very many of the older houses in Skinflats have been closed or scheduled for Representation under Section 16 of the Housing (Scotland) Act 1930.

"The hamlet of Longdyke has no water closets, the conveniences being privies and covered ashpits. The drainage is to a settling or septic tank, the effluent from which is piped to Kirkton Ditch, about two hundred yards distant, which ditch ultimately discharges into the River Carron. Many of the houses at Longdyke are scheduled for closure under the 1930 Housing Act.

"There has never been any complaint of pollution either in connection with Skinflats or Longdyke.

"The Special Drainage Districts on the Bonny are Bonnybridge Special Drainage District (No.1) comprising Banknock, Haggs, Longcroft, Dennyloanhead and the part of Bonnybridge Village north of the Bonny, and Bonnybridge Special Drainage District (No. 2) which includes that part of the Village of Bonnybridge to the south of the Bonny.

In connection with Special Drainage District (No.1) there are two separate sewage purification works, namely, one at Longcroft and the other at Dennyloanhead, the effluent from each of which discharges in a favourable condition into the Bonny.

"In connection with District (No.2) the sewage works which also serve a part of District (No. 1) were erected many years ago on the left bank of the Bonny. Stoddart's trays were used as distributors over the filter beds, but fully twenty years ago the trays were so rusted, twisted and warped as to function very unsatisfactorily. They were therefore removed and the effluent from the tanks flowed for a time on to the filters. Within recent years Attwood's revolving filters were installed, and it was thought that all would be well. At Bonnybridge Village there has been a great extension of the housing with all modern conveniences, with the result that the greatly increased volume of sewage is far beyond what the Bonnybridge sewage purification works are capable of dealing with, so that the effluent passes to the Bonny in an unsatisfactory condition.

"This matter has received much consideration from the members of the Bonnybridge Special Drainage Districts (Nos. 2 and 1) and a report was received from a sewage engineer, but owing to the great expense involved there has as yet been no action.

"The village of Allandale, comprising also a few houses called Dundas Cottages is not a Special Drainage District. Its drainage is treated by two septic tanks, a fairly large one for Allandale proper, and a small one for Dundas Cottages. The effluent in each case passes to a small stream, and eventually reaches the Bonny. No complaints have been received.

"As I have already indicated, the question of the pollution of the Carron and the Bonny has received much consideration from the County Council. In 1930 I was requested to make a report on the matter, which I did in November of that year.

"Thereafter a deputation from the County Council made a visit of inspection to the Paper Works, and saw for themselves the actual conditions.

“As a result of my report and of the deputation’s visit a section of the County Council advocated an extensive scheme of drainage embracing the valleys of the Carron and the Bonny.

“In the case of the Carron the sewers would have extended from above the Paper Mills, taking in the sewage of Denny Burgh, and eventually linking up with the drainage systems of Larbert and Falkirk.

“In the case of the Bonny Valley the sewers would have served all the populous places from Banknock through Bonnybridge, to join with the Carron Valley Sewer.

“Owing largely to the expense involved, the plan never got further than a suggestion, although there was a great probability of its ranking for a very considerable grant for the relief of unemployment.

“Of course the Falkirk and Larbert Scheme has been completed, and there is hardly any doubt that it would be more difficult now to complete the comprehensive scheme. For one thing there might be difficulty about getting grants, and certain engineering difficulties might be encountered, which could have been obviated altogether if the problem had been dealt with as a whole from the first.

“With regard to the various sewage disposal works, those at Longcroft, Dennyloanhead, and Bonnybridge, which all discharge their effluents into the Bonny, are much on the same plan in that they each contain the usual grit chamber, sedimentation or septic tanks, filter beds, etc.

“In the case of Denny Burgh sewage purification works, the effluent from which is discharged into the Carron, there are no grit chambers, but there are large sedimentation tanks with a capacity of 363,900 gallons. Instead of ordinary filters seven acres of level, suitable ground are used for land filtration.

“The works at Dalderse for the treatment of Falkirk and Larbert sewage are on the most up-to-date plan, with the exception that the tank effluent passes to the Carron without being filtered. The Carron is of course tidal at the point of discharge. If, in the course of time, the condition of the effluent indicates the need of filtration suitable filters will be provided.

“For the purposes of the proposed inquiry, various samples have been taken of the raw sewage before treatment in the respective disposal works, and of the effluent from the disposal works as it enters the stream. From the Analysts reports it will be observed that the amount of matter in

suspension and the oxygen absorbed in five days have been reduced as follows :—

	Matter in Suspension in parts per 100,000			Oxygen absorbed in 5 days in parts per 100,000		
Longcroft Sewage Works	5.48	becomes	5.88	8.07	becomes	1.98
Dennyloanhead „ „	15.30	„	4.45	22.36	„	5.04
Denny Burgh „ „	36.80	„	1.30	30.24	„	2.80
Dalderse „ „	29.88	„	22.77	12.36	„	10.16
Bonnybridge „ „	11.82	„	14.67	7.83	„	8.78

The **Longcroft Sewage** may be described as 'very weak'. The matter in suspension is small, and is given as fractionally increased in the effluent. The figure for oxygen absorbed in five days, however, is very favourable. A sample of water taken from the Bonny one hundred yards below the sewage works shows that the stream is in very good condition for the further purification of sewage.

'The **Dennyloanhead Sewage** is classed as 'weak.' The results of analysis of the untreated sewage and the effluent respectively are fairly good.

"The analysis of a sample of water taken from the Bonny one hundred yards below the Dennyloanhead Sewage works indicates that the water of the stream belongs to the 'clean' class, and is suitable for further purification of sewage.

"The various analyses therefore indicate that the Bonny Water is capable of dealing with the effluents from the Longcroft and Dennyloanhead sewage works.

"The **Denny Burgh Sewage** is of 'average strength,' a purely domestic sewage, with 'nothing detected that could be ascribed to a trade effluent.'

"The analytical results on the whole are the best of the five. Analysis of samples of the Carron Water taken one hundred yards above the sewage works and one hundred yards below indicates that the river has been grossly polluted with paper mill effluents before reaching Denny.

"With regard to **Dalderse Sewage Works** the figures showing the analytical results indicate only a very slight improvement in the condition of the effluent as compared with the condition of the untreated sewage.

"On receiving the report on the **Bonnybridge Sewage** I at once raised the question with the Analyst as to whether the samples of untreated sewage and effluent respectively had been transposed. The Analyst, however, was emphatic that

that had not been the case, and pointed out that the sewage entering the works may from time to time vary as to strength within very wide limits, and that as the samples of untreated sewage and effluent respectively were taken during the same visit, the effluent sampled probably represented the end result of a much stronger sewage than that sampled at the time of the visit. The only way to be sure of results in such a case, he said, would be to take samples of untreated sewage and effluent respectively hourly over a period of twenty-four hours, and mixing (1) the twenty-four untreated samples, and (2) the twenty-four effluent samples, so as to get an average sample of each.

"In any case the figures for the Bonnybridge Sewage Works are extremely unsatisfactory.

"In the case of the Carron the Trade Effluents are the Effluents from the four Paper Works. In each case samples of the river water were taken one hundred yards above and one hundred yards below the Works.

"The results of the analyses showed that the Carron Water above Carrongrove Paper Works is of great purity. The water one hundred yards below Carrongrove is very markedly polluted. The analysis of the other samples goes to show that each of the other Paper Works adds its quota of pollution, although in lesser degree than does Carrongrove.

"The polluting material is partly organic and partly inorganic. Organic material tends to be oxidised by the oxygen dissolved in the river water, and, if the dilution is great enough, and the flow sufficiently long, the water may be purified. Some of the organic material (for example, fibres of esparto grass) would appear to be particularly resistant to the oxidising process, as the fibres can be detected in the river water miles below Carrongrove.

"The inorganic polluting material (for example, china clay, NaOH, CaCo₃, etc.) does not oxidise, but continues in its original state, although in the river's lower reaches it is, of course, more diluted."

III.—HOUSING.

Provision of Houses by Local Authority.—In my last annual report it was stated that up to the end of 1934 the total number of houses provided directly by the Local Authority was 3121 of which 1987 were under their ordinary Schemes of Housing, and 1134 under their Slum Clearance Schemes, and that 645 new houses had been erected by private individuals with the aid of Subsidy. In addition, it was mentioned that 1058 houses had been reconditioned under the provisions of the Housing (Rural Workers) Acts.

Up to the End of 1935, the total number of houses erected or contracted for by the Local Authority was 3,282, of which 1,235 were for the purpose of rehousing persons displaced under Slum Clearance. The following are the details:—

Erected under—	1919 Act	1923 Act	1924 Act	1925 Act	1930 Act	Total.
Central Division	180	36	385	—	240	841
Eastern Division	190	—	1036	8	813	2047
Western Division	28	24	160	—	182	394
Totals ..	398	50	1581	8	1235	3282

Under the Housing (Rural Workers) Act an additional 184 houses have been reconditioned during the year, making the total up to the end of December, 1242.

Housing Census.—In anticipation of the passing of the Housing (Scotland) Act of 1935 I was authorised by the County Council to carry out a full Census and Survey of all the houses in the County area. In order to have this done with as little delay as possible, it was necessary to appoint a temporary staff, and this was done on the basis of one man to approximately every 1000 houses. The men were carefully chosen by the Sanitary Inspectors and the Survey was carried on under the supervision of the latter, each in his own area.

Record cards were prepared for the use of the staff and when these were completed they were carefully filed in a card

index for reference. As showing the extent of the inquiry a copy of this card is reproduced here:—

COUNTY COUNCIL OF STIRLING.

HOUSING CENSUS.

No. in Val. Roll (1934-35) Parish.....

Situation of house.....

Owner..... Rent £.....

Occupier Occupation

Sub-tenant Do.

Weekly wages—Occupier £..... Total household Income £.....

Sub-tenant £..... Do. £.....

No. of apartments (excluding sculleries, Bathrooms, W.C's, etc.).....

No. of Inmates.—		10 years and Over.	Under 10 years.	TOTAL (reckoned as adults).
Occupier's family.	(Male	.....	.....	.....
	(Female	.....	.....	.....
Sub-tenants and/or lodgers.	(Male	.....	.....	.....
	(Female	.....	.....	.....

Grand Total (reckoned as adults)..... Extent of overcrowding.....

Size of house required (If any) (a) for occupier.....

(b) for sub-tenant.....

*Floor space—Room (1)..... (2).....

(3).....(4) (5).....

(6).....(larger houses only in special circumstances).

Condition of house—Category I..... II..... III.....

Whether already represented for closure.....

*No floor space to be reckoned unless where the ceiling is at least 5 feet high.

Besides this card index, a loose-leaf register was also kept of all the information obtained.

This Census and Survey was finally completed in September, and in submitting tabulated statements of the results I reported as follows:—

“The 1935 Act puts upon the Local Authority the duty of making such a Survey, not only of the houses, but of the occupants with a view to determining the amount of overcrowding in each Local Authority’s area.

“It seemed to me however that the Survey might well be made to serve a double purpose if the opportunity were taken to schedule the houses in Category III. for closure. Many of these Category III. houses were overcrowded so that were they closed and demolished under the 1930 Act suitable alternative accommodation could be provided under that Act for the displaced tenants, thus at the same time relieving overcrowding. The Survey is therefore doubly valuable.

“The tabulated figures which really speak for themselves will require and will repay close study.

“A complete set of figures is made out for each of the five Divisions in the County, and a Summary of these has been made for the County as a whole.

“The housing conditions in the five Divisions, from the point of view of their fitness or otherwise for habitation, vary very much, being worst in the Southern Division of the Eastern Area, and best in the Southern Division of the Central Area.

“Many of the houses in the Southern Division of the Eastern Area were built a good many years ago to accommodate workers in some local industry (usually mining). Even from the first they were far from meeting present-day requirements in the way of Building Byelaws, water supplies, sanitary conveniences, drainage, etc., and as the pits ceased to be worked so was less and less attention paid to the upkeep of the houses. The general rule was, therefore, that as the mining industry waned the houses in connection with the industry deteriorated.

“As an indication of the inferior type of house provided in this division, the percentage of one-apartment houses there is even now fully 11 per cent. as compared with approximately 4 per cent. in the other divisions.

“The Department of Health have just issued to Local Authorities a circular and two Memoranda on the procedure to be adopted under the 1935 Housing Act, urging Local

Authorities to make all haste in the provision of houses to relieve overcrowding.

"It is pointed out that a full and complete Survey will require to be made in terms of the Act, and it is suggested, that to begin with a limited survey might be made so as to enable the immediate building programme to be determined.

"Our plan, on the other hand, has been to get exact information from the first and we therefore proceeded with a full Survey. It was found, however, useful to report the results to the Housing Committee from time to time as the various parishes were overtaken.

"The whole Survey has now been completed, and the results fully detailed are available for the Committee. That plan, I feel, has in our case resulted in a saving both of time and money, and has given data as reliable as possible on which to base our housing policy.

"The Department in their circular lay it down, that no grant will be paid on any house erected of less than three apartments, either under the Act of 1935 or that of 1930. They further point out that the new Act lays down a penal standard specifying the minimum accommodation which families of particular sizes may occupy, and it is urged that the size of the rooms should be large enough to accommodate the families permitted in the various sizes of houses, namely, three apartments, four apartments, etc.

"The Department, for the guidance of Local Authorities, indicate the sizes which will meet with their approval. The rooms will on the whole be larger than those provided in recent years. This is a wise policy which has been recognised in our County from the beginning of our housing schemes."

The total number of houses inspected was 18,779, and the following is a condensed abstract of the results obtained:—

	1 Apt.	2 Apts.	3 Apts.	4 Apts.	More than 4 Apts.	Total.
Number of (a) Houses inspected . .	1090	7231	5699	2288	2471	18,779
(b) Overcrowded Houses	239	2698	1186	160	20	4303
(c) Houses unfit for habitation (not included in (b))	590	1231	220	77	25	2143
Of which already being dealt with but still occupied	288	397	61	16	3	765
Leaving still to be considered	302	834	159	61	22	1378

With regard to overcrowding, it was found from the Census that 4397 families would require to remove to larger houses, the reason for this being that in the 4303 overcrowded houses there were 402 sub-tenants.

The Committee went into the question very thoroughly, taking into consideration the extent to which it is estimated that existing overcrowded houses which will be vacated when the new houses are built, will be available for reletting to families from other overcrowded houses. As the bulk of the overcrowding occurs in one, two and three-apartment houses, the Committee deemed it prudent to commence the first experimental scheme of decrowding in the County with the erection of a number of the larger type houses in order to ascertain what the effect of decrowding would be, and they decided to recommend the erection of a number of new houses equal to 25 per cent. of the houses found to be overcrowded.

The results of the Survey of houses under the 1930 Act also came under consideration, and it was agreed to recommend the erection of 75 per cent. of the houses scheduled for closure, and which have not already been dealt with. That percentage will probably prove sufficient as no doubt owners of a proportion of the houses scheduled will wish to recondition them.

The total number of houses to be built, therefore, is 1075 under the overcrowding Sections of the 1935 Act, and 1035 under the Slum Clearance provisions of the 1930 Act, making a grand total of 2110 new houses to be provided.

These will be allocated as follows:—

AREA.	For relief of Overcrowding				For Slum Clearance Purposes.			For Both Schemes.				Total.
	3 Apts.	4 Apts.	5 Apts.	6 Apts.	3 Apts.	4 Apts.	5 Apts.	3 Apts.	4 Apts.	5 Apts.	6 Apts.	
CENTRAL—												
Throsk & Fallin	12	38	10	—	6	2	0	18	40	10	—	68
Cowie	8	40	16	—	24	16	4	32	56	20	—	108
Bannockburn	10	50	20	—	8	32	10	18	52	30	—	138
Bannockburn (Rural) ..	—	2	2	—	6	2	—	6	4	2	—	12
Whins of Milton	—	6	2	—	4	8	0	4	14	2	—	22
Cambuskenneth	—	2	—	—	—	2	0	—	4	—	—	4
Cambusbarrow	4	14	2	—	6	8	0	10	22	2	—	34
Kilsyth Parish (Eastern) ..	8	12	4	—	—	6	2	8	30	10	—	48
Do. (Western)	—	12	4	—	—	6	2	8	30	10	—	48
Denny Parish (Excluding Bonnybridge)	10	40	16	—	4	12	4	14	52	20	—	86
Plean	8	28	8	—	0	4	0	8	32	8	—	48
Bonnybridge (Lighting District)	8	12	4	—	—	—	—	8	12	4	—	24
Dunipace Parish	—	6	—	—	6	2	0	6	8	—	—	14
Kippen	—	1	3	—	2	2	—	2	3	3	—	10
Buchlyvie	—	3	—	—	—	1	—	—	4	—	—	4
Gargunnoch	2	—	—	—	6	2	—	8	2	—	—	10
Logie	—	6	4	—	4	2	2	4	8	6	—	18
EASTERN—												
Carron	—	30	6	—	16	24	4	16	54	10	—	80
Brightons	—	20	4	—	16	4	—	16	24	4	—	44
Larbert	—	30	6	—	8	10	—	8	40	6	—	54
Stenhousemuir	10	40	10	—	10	12	2	20	52	12	—	74
Carronside	—	16	8	—	28	28	6	28	44	14	—	86
Callania (Muiravonside) ..	—	10	4	—	4	2	—	4	12	4	—	20
Polmont	4	4	4	—	12	4	—	16	8	4	—	28
Redding	—	22	4	—	32	30	2	32	52	6	—	90
Shieldhill	—	16	8	—	4	16	—	4	32	8	—	44
Avonbridge	2	4	—	—	12	16	2	14	20	2	—	36
Avonbridge (Slamannan) ..	—	6	—	—	16	2	2	16	8	2	—	—
Maddiston	—	34	10	—	20	20	4	20	54	14	—	88
Standburn	—	2	2	—	6	—	—	6	4	2	—	12
Whitecross	—	4	2	—	18	8	2	18	12	4	—	34
Laurieston	12	20	14	2	12	40	8	24	60	22	2	108
Glen Village	—	—	8	—	8	2	—	8	2	8	—	18
Bonnybridge & Greenhill ..	—	36	16	2	24	4	—	24	40	16	—	80
Allandale & Castlecary ..	—	6	6	2	4	4	—	4	8	6	—	20
Dunmore & Airth	—	4	4	2	32	10	2	32	14	6	—	54
Letham	—	8	8	2	—	—	—	—	8	8	—	18
South Alloa	—	2	—	—	—	—	—	—	2	—	—	2
Bothkennar	—	4	2	—	12	4	—	12	4	4	—	22
Slamannan	—	16	8	2	76	36	4	76	52	12	2	142
Falkirk Parish (Southern Area)	—	16	8	—	10	—	—	10	16	8	—	34
WESTERN—												
Torrance	—	8	2	—	8	4	—	8	12	2	—	22
Baldernock	—	2	—	—	4	2	—	4	4	—	—	8
Milton of Campsie	—	8	4	—	12	6	2	12	14	6	—	42
Balfour	—	8	2	—	12	4	0	12	12	2	—	26
Buchanan	—	4	—	—	4	4	0	4	8	—	—	12
Drymen	—	6	2	—	8	4	0	8	10	2	—	20
Fintry	—	2	—	—	14	2	—	16	4	—	—	20
Killearn	—	4	—	—	4	—	—	4	6	—	—	10
Strathblane	—	8	—	—	12	—	—	12	10	—	—	22
Lennoxtown	—	36	8	—	—	24	8	—	60	16	—	76
Whole County	100	704	257	14	534	431	70	634	1135	327	14	2110

Without doubt, the erection of such a large number of houses is a great undertaking, but the County Council are anxious to have them completed with the least possible delay. Judging from past experience, however, it can hardly be expected that the work can be overtaken within two or even three years, but, of course, as time goes on more and more houses will be available for occupation as they are built, so that the conditions indicated by the Census and Survey with regard to overcrowding, and slum dwellings will gradually improve.

PLANS FOR NEW BUILDINGS, IMPROVEMENTS, ETC.

The total number of plans submitted throughout the year was 243. Plans for new dwelling-houses embraced in that figure numbered 93 and these provided for the erection of 488 dwellings, two being of two apartments, 207 of three apartments, 225 of four apartments, and 54 of more than four apartments.

Of these 488 new houses, 288 were for the County Council.

Besides plans for new houses, 114 plans were for alterations or additions to existing buildings, and in 69 of these, application was made for subsidy under the Housing (Rural Workers) Act, 1926.

Other plans included one for a Church, one for a School, one hostel, a tea-room, a club-house, 4 shops, and 8 byres.

FORMAL REPORT TO THE DEPARTMENT OF HEALTH FOR THE YEAR ENDED 31ST DECEMBER, 1935, ON PROCEEDINGS TAKEN AS REGARDS THE INSPECTION, IMPROVEMENT, AND DEMOLITION AND CLOSURE OF DWELLING-HOUSES.

HOUSING (INSPECTION OF DISTRICT) REGULATIONS (SCOTLAND), 1928.

1. Number of dwelling-houses inspected:—

(a) during the year	18,779
(b) Since 1st January, 1930	19,570

2. Number of dwelling-houses which on inspection were considered to be in any respect unfit for human habitation:—

(a) during the year	1378
(b) since 1st January, 1930	3144

HOUSING (SCOTLAND) ACT, 1925.

3. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation:—
- (a) Cases where requirements complied with by owners— ..
- (i) With assistance under the Housing (Rural Workers) Acts, 1926 and 1931 66
- (ii) Without such assistance.. .. 16
- (b) Cases where works carried out by Local Authority after failure of owners to do so 0
- (c) Cases still pending 71
4. Number of cases where w.c. accommodation was provided at the instance of the Local Authority without an intimation under Section 20 (1) 0
5. Number of houses of (a) one apartment, and (b) two apartments, for the erection of which the consent of the Local Authority has been given in terms of Section One hundred and eleven
- (a) 0
- (b) 2

HOUSING, TOWN PLANNING, ETC. (SCOTLAND ACT), 1919.

6. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply:—
- (a) Cases where requirements complied with by owners—
- (i) With assistance under the Housing (Rural Workers) Acts, 1926 and 1931 27
- (ii) Without such assistance.. .. 6
- (b) Cases where works carried out by Local Authority after failure of owners to do so 0
- (c) Cases still pending 0
7. Number of cases where water supply was provided at the instance of the Local Authority without a notice under Section 40 (1) .. 0

HOUSING (SCOTLAND) ACT, 1930.

8. Number of dwelling-houses in respect of which notices were served under Section 14 (1) ... 0

9. Number of dwelling-houses rendered fit for human habitation following on notices under Section 14 (1)—	
(a) With assistance under the Housing (Rural Workers) Acts, 1927 and 1931	—
(b) Without such assistance	—
10. Number of dwelling-houses in respect of which work has been done by the Local Authority under Section 15 (1)	0
11. Number of dwelling-houses which were rendered fit for human habitation at the instance of the Local Authority without a notice under Section 14 (1)	0
12. Number of dwelling-houses in respect of which in terms of Section 17 a demolition order or closing order under Section 16 (3) has been substituted for a notice under Section 14 (1)	0
13. Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1)	89
14. Number of dwelling-houses referred to in 13:—	
(a) Which have been rendered fit for human habitation—	42
(i) With assistance under the Housing (Rural Workers) Acts, 1926 and 1931	40
(ii) Without such assistance	2
(b) In respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit	63
(c) In respect of which demolition orders have been made under Section 16 (3)	248
(d) In respect of which closing orders have been made under Section 16 (3) and (4)	—
15. Number of dwelling-houses in respect of which closing orders have, in terms of Section 16 (3), been determined by the Local Authority, following upon the houses having been rendered fit for human habitation	—
Demolition Orders determined	3
16. Number of houses in respect of which advances have been made in terms of Section 34 towards cost of repairs and amount so advanced	6—£300

HOUSING OF SEASONAL WORKERS.

For the Northern part of the Central Area Mr. Sinclair writes in his report that—

“There are two huts which are used every year for the accommodation of Seasonal Workers, one at Arnprior and one at Buchlyvie. Several inspections of these were made, and in both cases the owner was requested to comply with the provisions of the Bye-laws relating to precautions against fire. This was attended to.

“It was noted that Seasonal Workers were being accommodated in a house near Kippen without notice being given to the Local Authority. The attention of those concerned was drawn to this matter and the formal notice was thereafter received. It was requested that suitable separate sanitary accommodation, etc., be provided, but rather than do this the workers were withdrawn.”

Mr. Goldie, for the southern part of the same area reports:—

“During the year potato diggers were housed in large tents at Milnquarter, Gallamuir Farm, Plean.

“The dwelling-houses at Milnquarter are unoccupied ploughmen’s houses. At first the proposal was to house the potato diggers there, but owing to their damp condition, and their not complying with the Bye-laws in respect to fire-escapes, the farmer had two large marquees erected for the purpose, one to accommodate nine men and the other to accommodate fifteen women. The old unoccupied ploughmen’s houses were put into use for cooking purposes and drying of clothes.

“This is the first time that tents have been used for housing potato diggers in this area.”

In the Western Area, Mr. Stewart reports that potato diggers were employed and accommodated at two farms in Balfron parish, three in Campsie parish, three in Drymen parish, one in Fintry parish, and one in Killearn. Twenty-three inspections were made throughout the season.”

TENTS, VANS, AND SHEDS BYELAWS.

Mr. Stewart, Sanitary Inspector for the Western Area, in his Annual Report writes:—

“The desire of the town dweller to enjoy the purity of the country air is each year sending people in greater numbers to the Western area of Stirlingshire. This temporary, recurring, exodus from the towns, results in the establishing of camps, either in the forms of tents, caravans or huts as their shelter.

"One camp in particular was established on Inchcailloch Island, Loch Lomond, at the end of June and continued into September. This camp is under the auspices of the I.S.S., and has as its aim the provision of a camp holiday for the unemployed. The men come to the island in batches of forty and stay for a fortnight. The supervision is done by university students and all live under canvas. The camp is well conducted.

"Another type of camp is established in Strathblane parish, and is under the auspices of the Boy Scout Movement. The boys come out for week-ends and any vacation period. If the weather is suitable they live under canvas, but a permanent brick building, with all conveniences and facilities exists, which is utilised in inclement weather, also permitting of winter camping. This is also a well conducted camp.

"The tendency for certain land owners to let, on a yearly basis, sites for huts, tents, or caravans, has been taken advantage of by many people, resulting in the erection of a more permanent structure in the shape of huts. These huts are left in position at all times, and are occupied by the hut owner during the week-ends and holiday periods. On one estate in Strathblane parish, a very satisfactory control is exercised, a bathing pool with constantly flowing water provided, together with a putting green and playing area. This landlord is to be congratulated on his, so far, successful endeavour to keep conditions satisfactory."

For the Central Area Mr., Sinclair reports that—

"In one instance a caravan was found grossly overcrowded. The Owner took up the attitude that the Local Authority should provide him with a house. The matter was reported to the Local Authority and he was given a few weeks to abate the overcrowding, failing which legal proceedings were to be taken. He ultimately removed to another District."

IV.—FOOD SUPPLY.

DAIRIES.

The new Dairy Byelaws drafted by the County Council under the Milk and Dairies (Scotland) Act, 1914, received the approval of the Department of Health in March, 1935. Copies of these Byelaws were duly circulated amongst the dairy-men in the county, and inspections have been and are being made by the Sanitary Inspectors in order that the various premises may be brought up to the new standards, so that the present position with regard to registration may be said to be in a state of transition, and at the end of the year the majority of the dairies had merely been provisionally registered, pending the completion of any necessary repairs or improvements. Already, however, quite a number of new byres have been erected on modern lines.

The total number of dairy farms in the county which have been registered, provisionally or otherwise, is 440, the approximate number of cows being 8,600.

MILK (SPECIAL DESIGNATIONS) ORDER, 1922.

At the end of the year 1935 the number of Dairies licensed under the above Order was 25. Five of these came under the designation "Certified"; eighteen "Grade A (Tuberculin Tested)," and two "Grade A." A list of the names and addresses of the holders of these licences will be found in the County Veterinary Inspector's Report at the end of this Section.

Periodically, samples of milk were taken both for chemical and bacteriological examination. As a general rule, the butter-fat content of the samples was well up to the standard required—3.5 per cent.—and with regard to cleanliness the following table of bacterial counts shows the standard maintained. To understand this table, it should be remembered that the standard for "Certified" milk allows not more than 30,000 bacteria per c.c. of milk, and for "Grade A," not more than 200,000 per c.c. In all, 55 samples were taken. In 47 of these, the examination indicated a very good, clean milk, although the count in three of these in the "Certified" Class was slightly above the standard for that designation. Six of the samples gave definite evidence of the presence of Coliform Bacilli, indicating some probable neglect in the toilet of the cows. The other three samples were somewhat doubtful, being just on the borderline. On the whole, therefore, it may be said that with regard to quality and cleanliness, the milk produced in Stirlingshire under the Special Designations Order was very good indeed.

MILK (SPECIAL DESIGNATIONS) ORDER—BACTERIAL COUNTS, 1935.

FARM	Date of Report.	No. of Organisms on Agar per C.C. After 48 hours. Average—	Evidence of Coliform Bacilli after 72 hours.	REMARKS.
"Certified."				
A.	11/6/35	3000	Nil	Very good milk.
	6/6/35	50,000	Nil	Count slightly above standards.
	30/12/35	28,000	Nil	Very good milk.
B1.	13/1/35	20,000	Nil	
	14/6/35	37,500	Nil	Count" slightly above.
	9/12/35	7000	Nil	Very good.
B2.	8/6/35	7000	Nil	"
	9/12/35	5500	Nil	"
G.	27/12/35	15,000	Nil	"
L.	11/6/35	11,500	Nil	Count" Slightly above.
	15/11/35	35,000	Nil	
"Grade A. (T.T.)"				
B.1	17/6/35	12,000	Nil	"
	18/11/35	8500	Nil	"
B.2	13/1/35	8000	Nil	"
	14/6/35	4000	Nil	"
	15/11/35	40,000	Nil	"
B.3	28/1/35	10,750	Present	Not up to Coli standard.
	8/3/35	2500	Nil	Very Good.
	20/9/35	49,000	Trace	"
	18/10/35	8500	Nil	"
C.1	11/1/35	6000	Nil	"
	11/6/35	10,000	Nil	"
	22/11/35	5000	Nil	"
C.2	24/6/35	3000	Nil	"
	18/11/35	12,000	Trace	"
C.3	17/6/35	3000	Nil	"
	18/11/35	23,000	Nil	"
D.	30/6/35	100,000	Present	Doubtful.
	18/11/35	14,500	Nil	Very Good.
E.B.	17/6/35	30,000	Present	Below Coli standard.
	26/6/35	17,500	Nil	Very Good.
	6/12/35	8000	Nil	"
F.B.	1/3/35	70,500	Nil	"
	25/6/35	16,000	Present	Below Coli standard.
	30/6/35	5000	Nil	Very Good.
	6/12/35	11,000	Nil	"
H.B.	21/6/35	4500	Present	Below Coli standard.
	20/9/35	41,000	Nil	Very Good.
H.	24/12/35	17,500	Nil	"
N.K.	21/6/35	9000	Nil	"
	29/11/35	23,500	Nil	"
S.	22/12/35	8500	Present	Below Coli standard.
	14/1/35	4000	Nil	Very Good.
T.	22/2/35	200,000	Nil	Count just on borderline.
	24/2/35	74,000	Nil	Very Good.
W.	21/6/35	5000	Nil	"
	24/12/35	17,500	Nil	"
W.2	25/6/35	120,000	Trace	Doubtful.
	30/6/35	95,000	Present	Falls in Coli test.
	29/11/35	17,500	Nil	Very Good.
"Grade A."				
B.1	7/3/35	36,000	Nil	Very Good.
	25/6/35	6500	Nil	"
	29/11/35	31,000	Nil	"
B.2	14/6/35	7000	Nil	"
	15/11/35	13,500	Nil	"

SUPPLY OF MILK TO SCHOOL CHILDREN.

Early in the year a scheme was inaugurated for the supply of a ration of milk to the children in all County Schools. The scheme has been taken advantage of by the great majority of the pupils, and has worked out very successfully, although it is perhaps too soon yet to give any opinion as to the actual benefits resulting.

So far as was possible, it was arranged that milk for use in the Schools was from tubercle-free herds, or that the milk was pasteurised, but in a few instances that could not be arranged. From time to time samples were taken both for chemical and bacteriological examination, and generally it may be said that the results were very satisfactory.

With regard to the supply of milk to Schools from tubercle-free herds or otherwise, I have before me a pamphlet issued by "The People's League of Health," in which figures are given on this question for England and Wales, and for Scotland. These may be quoted here:—

" RETURNS RECEIVED IN ANSWER TO THE LEAGUE'S QUESTIONNAIRE.

" From (a) Medical Officers of Health in England and Wales.
and (b) Medical Officers of Health in Scotland.

" A.—*England and Wales.*

The figures received from 243 areas, including 1,760,241 children, show:—

Group I. Protected.

Certified and Grade A.T.T.	...	...	49,469
Pasteurised	...	...	1,333,807
Sterilised	...	...	14,140
Boiled	...	...	7,700
			<hr/> 1,405,116 <hr/>

Group II. Unprotected.

Raw Milk	...	...	266,621
Grade A	...	...	88,504
			<hr/> 355,125 <hr/>

“ B.—Scotland.

The figures received from 22 areas, including 330,422 children, show:—

Group I. Protected.

Certified and Grade A.T.T.	...	...	151,499
Pasteurised	...	...	175,319
Boiled	...	...	739
			<hr/> 327,557 <hr/>

Group II. Unprotected.

Raw Milk	...	...	2,637
Grade A	...	...	228
			<hr/> 2,865 <hr/>

“ The Milks in Groups I. may be named ‘Protected’ Milks in the sense that the possibility of the conveyance of disease is practically excluded. In Groups II. are ‘Unprotected’ Milks in the sense that either no particular precautions are taken to prevent the conveyance of disease (Raw Milk), or the precautions, though not without value, are inadequate (Grade A).

“ It may be noted that while in Scotland ‘Unprotected’ Milk reaches only 0.86 per cent. of the children, this quality of milk is supplied to no less than 20.1 per cent. of the children in England and Wales. And again, in England and Wales only 2.8 per cent. of the children receive milk from tuberculin tested cows, while the figures from Scotland show a percentage of 45.8.”

FOOD AND DRUGS ACTS.

As will be seen from Table VI. the number of samples taken under these Acts totalled 240, of which 89 were taken formally and 151 informally. These informal or “test” samples are merely taken for the information of the Inspector, and should one of them prove not genuine, then a formal sample or samples from the same source would be taken with a view to prosecution should the analysis still prove unsatisfactory. Out of the 240 samples, 7 were certified not genuine. In two of these, the samples were formal, and in one case legal proceedings were taken. The sample was of mince, which contained 1,060 parts per million of sulphur dioxide during a prohibited month, and the vendor was fined £1. In the case of the other six defective samples, warnings were given and further samples taken.

SLAUGHTER-HOUSES.

The number of Private Slaughter-houses in the County remains as before, namely, 30. The licences were all renewed during the year, and endorsed with the days and hours of killing. The premises were frequently inspected by the Sanitary Inspectors, and were generally found fairly well kept.

The provisions of the Slaughter of Animals (Scotland) Act of 1928 continue to be observed, and slaughtering is being conducted in quite a humane manner.

MEAT INSPECTION.

Acting as Detention Officers, the Sanitary Inspectors examined a considerable number of carcasses in Slaughter-houses, and apart from carcasses detained for inspection by the County Veterinary Inspector, they condemned and destroyed, with the owners' consent, over 100 diseased parts of carcasses, and several whole carcasses. As a general rule, however, the animals killed in the Slaughter-houses were of good quality.

ANNUAL REPORT BY COUNTY VETERINARY INSPECTOR.

In compliance with the instructions contained in Circular No. 2 (Health Services) of the Department of Health for Scotland, dated 19th December, 1935, I have the honour to submit the Report on the veterinary inspection of the cattle in the dairy herds of the County of Stirling for the year ended 31st December, 1935.

The area to which this Report refers consists of the County of Stirling, and the Burghs of Bridge of Allan, Denny and Dunipace, Grangemouth, and Kilsyth.

GENERAL REVIEW.

During the year under review, the statutory inspection of all cows in registered dairy herds in the County and Burghs was carried out, and no administrative difficulties were encountered.

In September, 1935, Mr. James D. McLauchlan, M.R.C.V.S., D.V.S.M., vacated the post of Assistant Veterinary Inspector on his appointment as County Veterinary Officer of Dorset, and during the remainder of the year the position remained vacant.

CLEAN MILK TESTS.

The Monthly Clean Milk Tests, which were inaugurated by the Local Authority in 1929, in conjunction with the West of Scotland College of Agriculture, were continued during 1935.

Thirty-three farmers drawn from all over the County participated in the Tests, and their herds, byres, and methods of production were fully representative of the dairying industry of the County.

A total number of 358 samples were submitted for examination to the Agricultural College. One hundred and sixty-five (46 per cent.) fulfilled the conditions of cleanliness and butter fat content of Certified Milk (not more than 30,000 bacteria present in 1 c.c. of milk, absence of coliform bacteria in 1/10 c.c., and not less than 3.5 per cent. butter fat); 54 (15 per cent.) fulfilled the conditions of cleanliness and butter fat content of Grade A Milk (not more than 200,000 bacteria per c.c., absence of coliform bacteria in 1/100 c.c. of milk, and presence of not less than 3.5 per cent. butter fat); 56 samples (16 per cent.) fulfilled the conditions of cleanliness of Grade A Milk, but failed to reach the standard of 3.5 per cent. butter fat. In other words, 77 per cent. of the samples submitted satisfied the conditions of cleanliness applicable to Graded Milk.

Further analysis of the figures shows that in 46 samples the bacterial count exceeded 200,000 organisms per c.c., and 67 failed to pass the coliform test in 1/100 c.c. of the sample.

Regarding the butter fat content of these milk samples, 278 contained above 3.5 per cent. butter fat, and 69 were below 3.5 per cent. butter fat, but above the presumptive legal standard of 3 per cent., and 11 fell below the presumptive legal standard.

Section I.

CONDITION AND CLEANLINESS OF CATTLE.

(a) No instances were observed during the year in which the quality of milk was adversely affected by the nature of the fodder or diet.

(b) 1,651 cows were found with abnormal udders.

Forty of these exhibited symptoms that were suggestive of tuberculosis of the udder, and a bacteriological examination of the milk was carried out which proved positive for tubercle bacilli in 29 cases. These animals were immediately slaughtered under the Tuberculosis Order of 1925, and compensation, as laid down in the Order, paid to their owners.

Three hundred and thirteen cows were found suffering from acute mastitis in one or more quarters of the udder.

One thousand, two hundred and seventeen cases of atrophy of the udder were noticed, probably the result of previous attacks of mastitis, but, as the affected quarters were functionless, there was no danger to the milk of the remaining quarters.

Induration of a non-tuberculous character, generally the result of traumatism, was observed in 81 cows.

(c) In no instance was the milk from the affected animals being used for human consumption. Owners of affected animals were instructed in the proper disposal of the infected milk, and the steps to be taken for the prevention of the spreading of this condition to other cows. Occasion was also taken to point out the danger that followed the practice of feeding to calves the milk of cows with abnormal udders.

Section II.

INSPECTION OF CATTLE.

(a) In the County there were 440 Registered Dairies, containing 8,590 cows, and the regular inspection of the cattle in these herds was carried out thrice during the year.

One thousand, four hundred and seventy nine visits of inspection were made to the Registered Dairies, and 27,899 examinations.

(b) In addition, there were within the County 165 premises, containing 550 cows, which were not Registered Dairies, but from which milk was sold in small quantities.

Two hundred and thirty visits of inspection were made to these premises, and 1,116 examinations.

Section III.

BOVINE TUBERCULOSIS.

During Dairy Herd inspection, and particularly when dealing with cases under the Tuberculosis Order of 1935, the opportunity was always taken to interest owners in the question of eliminating bovine tuberculosis from their herds, and the method by which this result could be most easily achieved was demonstrated on the farm. Great stress has always been paid to the educational aspect of this branch of our work, and that our efforts have met with a measure of success is shown by the increase in the number of herds which are now tubercle-free.

(a) Among the dairy cows in the County there occurred 107 cases of tuberculosis which were of such a nature as to bring them within the provisions of the Tuberculosis Order. In addition to the 29 cases of udder tuberculosis mentioned above, there were 14 cases of tuberculous emaciation, and 64 cases of chronic cough showing definite clinical signs of tuberculosis.

(b) The tuberculin test was applied to 3,681 animals, in accordance with the provisions of the Milk (Special Designations) Order (Scotland), 1930, and 668 (18 per cent.) were found to react positively.

(c) The tuberculin test was not applied to any cows under Section 22 of the Milk and Dairies Act, 1914.

(d) List of dairies holding licences in respect of tubercle-free herds.

CERTIFIED.

Name and Address.	Average No. of Herd.	Estimated No. of Gallons Produced per Annum.
W. Betts Donaldson, Auchineden, Blanefield	35	24,500
James McCall, Blackdubs, Bridge of Allan	18	13,000
Alexander Cook & Sons, Burnhouse, Denny	28	22,000
Representatives of the late R. M. Reid, The Glen, Falkirk	50	40,100
Semple & Pirie, Lennoxlea, Lennox- town	35	29,200

GRADE A (TUBERCULIN TESTED).

W. Semple, Ballagan, Strathblane ...	7	5,200
J. B. Arneil, Ballewan, Blanefield ...	11	7,000
A. B. Bell, Bankell, Milngavie ...	28	21,900
N. P. Donaldson, Ballindalloch, Balfron	24	—*
T. G. Wilson, Carbeth Home Farm, Balfron Station	52	45,000
J. Paterson, Claylands, Balfron ...	36	27,200
W. J. Thomson, Craigbrock, Blane- field	11	7,600
A. C. Edmonstone, Duntreath, Blanefield	9	8,100
Mrs. Catherine B. Scott, Easter Balfunning, Balfron	20	14,000

* This herd is composed almost entirely of Aberdeen Angus cattle, and as the cows suckle their own calves, no estimate can be given of their milk production.

J. & J. McQueen, Finnich Blair, Drymen Station	18	16,200
W. L. Ritchie, Head of Balglass, Balfron	40	24,000
Royal Scottish National Institution, Househill, Larbert	33	22,000
Andrew Chalmers, North Kersebonny, Stirling	30	24,000
Charles Ross, Rashiehill, Balfron ...	30	20,500
G. Steel, Southfield, Slamannan ...	25	17,500
J. K. Steel, Threaprig, by Falkirk	14	10,000
J. Miller, Westerton, Kippen ...	32	21,500
J. Paterson, Woodend, Balfron ...	49	36,800

(c) Three other dairies within the County are believed to have tubercle-free herds. These herds contained 70 cows, and produced 65,000 gallons of milk during the year 1935.

Section IV.

MISCELLANEOUS.

Two dairy herds in the County were licensed for the production of Grade A Milk during 1935.

GRADE A.

Name and Address.	Average No. of Herd.	Estimated No. of Gallons Produced per Annum.
J. Alston, Ballikinrain Home Farm, Killearn	58	43,500
S. Adam. Broadgate, Strathblane ...	30	23,000

(b) During the year seven reports were received from Local Authorities stating that samples of milk consigned from Stirlingshire, and collected within their areas, had been found on biological examination to be positive for tubercle bacilli.

In each instance the herd in question was visited immediately and examined clinically. Individual samples were taken from all cows showing abnormal udders, and the use of their milk prohibited under the Tuberculosis Order of 1925. Group samples were taken from the udders of the remainder of the cows in milk. All samples were submitted to the County Bacteriologist for microscopical and biological examination.

In four instances the cows which were excreting tubercle bacilli in their milk were discovered by the biological test, and they were slaughtered under the Tuberculosis Order.

In two instances, clinical, microscopical, and biological examinations failed to reveal any animal giving infected milk, and during the remainder of the year special attention was paid to the herds, but no case of bovine tuberculosis developed.

In the seventh instance the milk of the herd was found on biological test to be tubercle-free, but the investigation showed that a cow which had developed udder trouble had been sent to the Knackery after the positive sample had been taken, but before the report had been received from the Local Authority. This farmer was cautioned as to his future conduct and his responsibility for reporting such cases impressed on him.

(c) Sections 13 and 14 of the Milk and Dairies (Scotland) Act, 1914, continued to be complied with. Sixty-two reports were received during the year—55 from owners and 7 from veterinary practitioners on behalf of owners of cows which were suspected to be suffering from one or other

scheduled form of tuberculosis. On investigation of these cases it was found that the milk from these animals was not being sold after suspicion became attached to them.

INSPECTION OF HIGHER GRADE MILK HERDS.

At the end of 1934 there were five herds licensed for the production of Certified, twelve for Grade A (T.T.), and one for Grade A Milk.

During 1935 the number of Certified Herds remained as in 1934. One Grade A (T.T.) herd removed to England, and six new licences were issued, bringing up to seventeen the number of licences in existence at the end of 1935. The Grade A licence in existence during 1934 was continued, and one new licence for the production of this grade of milk was issued during 1935.

The requisite veterinary inspections and tuberculin tests were made of the cattle in the higher grade milk herds during the year, the tuberculin used being made from a synthetic medium.

MEAT INSPECTION AND SLAUGHTER-HOUSES.

In the Landward Area of the County thirty-one Private Slaughter-houses were licensed. In addition, the Burghs of Kilsyth, Denny, and Grangemouth, have public slaughter-houses, and there is a private slaughter-house in Bridge of Allan. A regular system of veterinary inspection of all these premises has been carried out, and 1,186 visits were paid during the year.

Pigs.

Since the inception of the Pigs and Bacon Marketing Schemes, the number of pigs killed in the local Bacon Factories has doubled, and this has resulted in a large addition to the work of veterinary inspection. All the pigs killed in the Bacon Factories were stunned by electricity before being bled, and this method has proved a great improvement on that previously employed.

The carcasses of pork and hams imported from abroad were also examined, as well as the products which were dealt with in the cooked foods and canning branches of the Factories.

(1) Home-killed. 13,831 home-killed pigs were examined, and, on account of tuberculosis or other causes, 17 pigs were totally condemned and 1,676 pigs were partially condemned.

(2) Imported. There were imported into the County throughout the year, for processing in the various Bacon

Curing Factories, the carcasses of 42,000 pigs and 34,000 hams, and during our visits of inspection the opportunity of examining these products was always taken.

Portions of twelve sides of bacon, weighing 308 lbs., were condemned for blemishes, and 36 lbs. weight condemned for fracture of bone and consequent extravasation of blood into the surrounding tissues.

COWS, HEIFERS, BULLOCKS, BULLS, SHEEP, AND CALVES.

During 1935 the Veterinary Staff examined 213 cows, 120 heifers, 673 bullocks, 13 bulls, 1,293 sheep, and 40 calves in the slaughter-houses of the County.

Thirty-five cows, 3 heifers, 10 bullocks, 4 sheep, and 2 calves were totally condemned, and 92 cows, 14 heifers, 150 bullocks, 8 bulls, 45 sheep, and 1 calf were partially condemned on account of tuberculosis or other causes.

ACKNOWLEDGMENT.

In conclusion, I wish to record my appreciation of the loyal co-operation and willing assistance rendered by the members of my staff throughout the year.

V.—MEDICAL SERVICES.

MATERNITY SERVICE AND CHILD WELFARE.

Towards the end of the year the Secretary of State for Scotland, through the Department of Health, issued a circular drawing the attention of Local Authorities and their Medical Officers of Health to the recently published Report on Maternal Morbidity and Mortality in Scotland.

The Report reviews the causes of invalidism and deaths of mothers as brought to light by enquiries into the facts connected with 2527 deaths and a series of 39,205 births in Scotland in the years 1929 to 1933.

The circular states:—"The broad facts established for Scotland, as a whole, are that the maternal death-rate, which now stands at about 6 per 1000 live births, does not tend to fall: and that, 28 per cent. of the deaths associated with child-bearing were found to be assignable to lack of adequate ante-natal care, 26 per cent. to faulty intra-natal care, and 4 per cent. to faulty care in the puerperium. More than one-half of the total number of deaths (58 per cent.) were therefore classified as avoidable in the sense in which that term is used in the Report."

The circular suggests that Local Authorities and their Medical Officers of Health should consider in what directions the Maternity Services in their areas may be improved in the light of the information given in the Report and of the Conclusions and Recommendations.

The circular further suggests that the first step for Local Authorities to take, in view of the position disclosed, is to put in hand a Survey of Local maternity services in the light of the Conclusions and Recommendations contained in the Report.

The following gives a Survey of the County Maternity Services as suggested.

In the County Area a Maternity and Child Welfare Scheme was formulated in 1924. Its scope has since been expanded from time to time.

The Notification of Births to the Public Health Department is extremely useful, as it enables practically all mothers to be visited by the County Health Visitors soon after the date of the birth. During the first year the Health Visitors pay two further visits and more often where necessary.

Many expectant mothers are brought to the notice of the Public Health Department, and these are also seen by the Health Visitors.

Wherever the circumstances require it, grants of milk are made to necessitous expectant and nursing mothers. This is a service which has greatly increased and has had very good results. Such cases are kept under observation by the County Medical Staff and more frequently by the Health Visitors. Occasionally the family doctor is consulted by myself.

During the coal disputes of 1921 and 1926 respectively special machinery was instituted for distributing milk to expectant and nursing mothers and young children in mining areas. That much good resulted was clearly indicated by the fact that the infantile mortality for each of these years was remarkably low, it being only 61 per 1000 live births in 1926, the lowest on record for the County.

Up till the year 1929 any abnormal maternity cases reported by Medical practitioners to the County Health Department were treated in the Glasgow Royal Maternity Hospital under an arrangement with the Hospital Directors by which the County Council, through its Maternity and Child Welfare Scheme, paid all expenses for treatment.

In 1929, a Maternity Home of twenty beds was provided in connection with the newly erected Royal Infirmary, at Stirling. Ten of these beds were for the use of the County area and ten for the Burgh of Stirling. For these beds the two Local Authorities contributed £600 per bed, or between them £12,000 in all.

The new Royal Infirmary, at Falkirk, was opened about two years later, and here a similar arrangement was made between the County Council and Falkirk Town Council on the one hand, and the Falkirk Infirmary Directors on the other, by which the Local Authorities contributed £600 per bed, as in the case of the Stirling Royal Infirmary. In the Falkirk Infirmary, however, twenty-four beds were provided, twelve by the County, ten by the Burgh, and two by the Infirmary Directors.

Formerly, Glasgow was the nearest town where such services had been available, and it was felt to be a great step forward to have institutions of the kind practically at our doors.

There were also great advantages in having the Maternity Homes in such close association with the General Hospitals.

My ideal was, as far as possible, to make the geographical County a self-contained hospital unit, with the possibility of extending the area in the future to include the County of Clackmannan, and the adjacent portion of the County of Perth, if that were found agreeable to all the parties concerned.

It should here be acknowledged, that in this provision of Maternity Homes, the Local Authority and their officials

received every encouragement from the Department of Health, who hoped that the Authorities of other Counties would follow the Stirlingshire example. The Department also approved the expenditure for a fifty per cent. grant under the Maternity and Child Welfare Scheme.

The management of the Homes, including the appointment and payment of the medical and nursing staff, was left in the hands of the Hospital Directors, as it was felt that the staffs of the General Hospital and of the Maternity Home in each case could be usefully and profitably co-ordinated if under one management. The Local Authorities pay to the Hospital Directors a fixed charge per occupied bed per day.

This was the first case in Scotland where the Local Authorities co-operated with the Voluntary Hospitals in the provision of maternity beds.

The Homes were meant to accommodate the following types:—

- (1) Abnormal cases are admitted on request received from the medical practitioner concerned. A good many of those cases are sent by medical practitioners and midwives for ante-natal examination at one or other of the Maternity Home Clinics.
- (2) Cases are admitted from houses where the conditions do not give the mother or baby a reasonable chance, either on account of the condition of the house itself, or because of overcrowding.
- (3) Unmarried mothers in certain circumstances are admitted. For most of these unfortunates, the Maternity Home is a perfect haven.
- (4) Mothers are admitted also whose houses are situated in out-of-the-way localities, making it extremely difficult or even impossible in some cases to secure proper medical or nursing care.
(For the four types of cases enumerated above, the County Council make a uniform charge of 30/- per case).
- (5) Private cases, not included in the four preceding categories may be admitted at a charge of 12/6 per day.

It may be said that neither of the Maternity Homes has ever been occupied up to capacity, although cases are admitted from Clackmannan County and occasionally from Perth County.

The Homes have, undoubtedly, justified their existence, and have done praiseworthy work not only in saving lives but in avoiding physical ailments of various kinds.

Maternity Clinics.—There is a Clinic in connection with each Maternity Home. Situated as these are in the two most populous centres of the County they serve very large populations in their immediate neighbourhood. The Clinics are also easily reached by people from the more outlying districts, there being a splendid transport service by road or rail.

They are open once a week, and mothers may be seen at other times by special appointment. A fair number of cases come ante-natal, but relatively few post-natal, being sent from all over the County by Medical practitioners and also by midwives.

The Stirling Maternity Home and Clinic have from the beginning been under the charge of Dr. Eva T. Cairns, who lives in Stirling, almost within a stone's throw of the Infirmary, and who while not actually resident in the institution, is almost equally well placed for the work.

The Falkirk Maternity Home and Clinic were at first under the charge of Dr. J. Chalmers Clark, who lives in Falkirk, but he resigned most regrettably from the position about a year ago. To succeed Dr. Clark, the Hospital Directors appointed Dr. John L. Horne and his sister, Dr. Jean Horne, who reside in Denny where they are in practice. The arrangement is, therefore, not quite so convenient as the one in Stirling.

The Clinic work, both ante-natal and post-natal, could with advantage be greatly extended. Midwives should be encouraged to send their cases there for ante-natal observation.

The Report further suggests that in every case of Pregnancy there should be at least three special medical examinations as follows:—

- (a) One about the sixth month;
- (b) Another about one month before term;
- (c) Another about two weeks before term.

The findings should be carefully recorded, so that the history of the case may be clear, any eventuality foreseen, and appropriate measures taken.

As an ante-natal precaution the Report says that midwives should be encouraged to notify the Medical Officer of Health of all women who engage them, so that he may have an opportunity of considering the patient's environment, and whether from the medical and social points of view the case is suitable for confinement by the midwife at home. It further says that the same procedure should be followed by medical practitioners when they decide that confinement at home is for any reason undesirable.

As a matter of fact, the procedure advocated for medical practitioners' cases has been followed in this County since the beginning of the Homes.

It would undoubtedly be of advantage if midwives at once notified the Medical Officer of Health of all women who engage them. The same procedure could then be adopted as has been the practice in the medical practitioners' cases. A Health Visitor could see the expectant mother in her home, and make a report on the environment and other circumstances bearing on the case, thus enabling the Medical Officer of Health to decide whether it is suitable for confinement by the midwife at home, or whether it should be dealt with in one of our Maternity Homes.

Emergency Calls.—Whenever a midwife has been engaged, she becomes in a way responsible for the case. As has been said she should in this County advise the pregnant mother to go to the Hospital Clinic more convenient. The midwife, however, may be confronted with certain antenatal emergencies making her dubious whether it would be safe to send the case to the Hospital Clinic. In such circumstances there is only one course open to the midwife, namely, to call in medical aid by means of the prescribed form.

In the same way during a case of Labour or during the Puerperium, if the midwife meets any emergency with which she feels herself unequal to deal, she must at once summon medical aid.

The midwives are encouraged so to act, and now readily avail themselves of such help, recognising that it is only thus they can discharge their responsibilities. The medical practitioner then becomes responsible for any treatment, removal to hospital, etc. It would be quite unfair to hold the midwife responsible for removal, etc.

Puerperal Pyrexia and Puerperal Fever.—If during the puerperium fever or other unfavourable symptom arises indicating that all is not well, the midwife again must summon medical aid on the prescribed form, such medical services being paid for by the County Council in necessitous cases, which, it may be said, form the great majority.

If in such a midwife's referred case, or if in one of his own cases, the medical practitioner is of opinion that institutional treatment is required, the patients are removed to Robroyston Hospital, by arrangement with Glasgow Corporation. At Robroyston Hospital there are special wards, besides special staff (medical and nursing) for dealing with puerperal cases.

Occasionally the medical practitioner concerned advises treatment at home, but institutional treatment in such cases better meets my view, and tends to allay further anxiety.

Too often, these cases go worse at home, because of lack of proper facilities for either treatment or nursing, the result being that in the long run they are sent to an Institution when their chances of recovery are of course much less.

One can hardly think of a more depressing charge for a doctor than a puerperal ward, as so many of the cases sent in have their chances of recovery seriously jeopardised by being retained too long at home.

In accordance with the Department's regulations, arrangements have been made for medical practitioners in difficult puerperal cases having the guidance of consultants, a consultant being appointed by the County Council for the Eastern half of the County, and another for the Western half. This arrangement has worked very well and has been of great service.

Welfare Clinics.—A special feature of Welfare work in the County is the organisation of voluntary Welfare Clinics, which have now been established for a good many years past in various centres.

Among the first to be established were in the mining villages of Fallin and Bannockburn. The former has served as a model for most of the others, for example, Cowie and Plean, Carron, Maddiston, Polmont, Blackbraes, Standburn, and Campsie, also the Burghs of Grangemouth, Kilsyth, and Denny.

The Clinics are open, some once per week, others every fortnight. The mothers bring their babies up to two years of age, that being recognised as the most critical period in a child's life. There they meet the doctor and the district nurse, and usually also voluntary lady helpers interested in this type of public work.

The primary interest is of course in the babies, but the opportunity is taken to have health talks with each mother, variations in health noted and suggestions made.

The preventive side is encouraged rather than the curative, but where necessary, reference is made to the family doctor.

My guidance is sometimes sought, but the management is entirely in the hands of local committees, usually, although not necessarily closely associated with the District Nursing Associations.

These Committees become greatly interested in the work, and their success in maintaining the health of the mothers and babies is a source of great local pride and satisfaction.

The cultivation of the social side is a special feature of the Clinics. As a rule each mother gets a cup of tea and a cake. The mothers also take the opportunity to compe-

notes and to discuss matters of mutual interest, so that these gatherings are regarded as a welcome change from the hum-drum routine of every-day life.

In connection with each clinic there is generally a social gathering about Christmas time and in some cases a Summer outing. I endeavour to be present at as many as possible of the Christmas functions, at which it is a great pleasure to see so many fine mothers and well-tended babies, even in the poorest districts. The health of the mothers and babies undoubtedly benefits. The whole atmosphere is admirable, and one cannot but feel that the Clinics are a pronounced success from the social as well as from the medical aspect.

In most cases a great part of the funds is the result of local effort, but small grants of varying amount in accordance with the local circumstances are made by the County Council, on my recommendation, under the County Maternity and Child Welfare Scheme.

A great deal of excellent work is being done mostly as a result of local voluntary effort, and it is noteworthy that in not a single instance has a welfare clinic once started been dropped.

Such clinics are not feasible in the more sparsely populated, widely scattered districts, and indeed it would not appear that such clinics are so much required there, but in several of such areas there is an arrangement which approximates to the Clinic idea. There, the district nurses supply me, at regular intervals, with the tabulated results of their home visits to mothers and babies. The information serves a useful purpose, and the County Council in recognition of it presents a suitable honorarium to each of the District Nursing Associations concerned.

It may here be said that, unless in some of the more remote parts, the County is well covered with District Nursing Associations, whose nurses are mostly registered as midwives, and are more or less actively engaged in midwifery, either independently or assisting the local medical men.

The births in the County during the year, 1934, numbered 1775, approximately 70 per cent. being attended by doctors and 30 per cent. by midwives. That proportion, however, varies very widely in different parts, the rural areas being as a rule mostly dependent on the doctors, but even in certain of the more industrial parishes, e.g.: Grangemouth, Larbert, and Muiravonside, the same rule holds.

The foregoing represents a fairly full survey of what is being done in the County on behalf of Maternal Welfare.

Although we are in that regard well among the foremost Counties, we are not at all likely to assume that there is

nothing further to be done, but ideas associated with the matter are in such a state of flux that it is very difficult to predict the lines of future progress, e.g.: some favour the idea of the midwife being the basis of a Midwifery Service, and that midwives should therefore have to undergo a very intensive training before being allowed to practise their calling, others hold that the work should be mostly in the hands of medical practitioners, the family doctor conducting such cases as a normal part of his general practice, while others again hold that midwifery should to the greatest extent possible be in the hands of specialist obstetricians.

The second view is put forward by the British Medical Association, and while those holding the third view are much in the minority, there are numbered among them men of great distinction whose opinions are worthy of respect and consideration.

It would be well if from these divergent schools of opinion some definite policy could be evolved, in order that any steps to be now taken may be on the lines to be ultimately adopted.

The Department's Circular is, however, very vague. It deals with the country as a whole, and its suggestions apply to large towns and county areas alike, although it is recognised that a maternal service suited to a large town might be quite inapplicable in a County area. It has also been already indicated that even within a County the several parts may differ so widely in their conditions that there would be of necessity be considerable variations in the maternal service.

For some time now a very important Committee has been taking evidence on the Scottish Health Services. The report will be very comprehensive, covering as it will every part of the Health Services, which will be treated as an organic whole. It may be taken for granted that the Maternal Services will not be treated as a separate entity, but will be placed in their proper relation to the other Health Services. Anything done now should accordingly be on lines which will form an integral part of the full plan of Scottish Medical Services of the near future. The Committee's Report was expected to be issued by the end of 1935, and cannot now be long delayed.

In these circumstances there hardly appears any urgent necessity in this County for advancing hurried proposals, and so possibly incurring the danger of creating vested interests which might in the ultimate scheme prove difficult and regrettable.

It is to be remembered that in this County there are already provided two Maternity Homes, which have so far proved

ample. In connection with these are clinics, ante-natal and post-natal. Steps, no doubt, might be taken with benefit to have these clinics more fully utilised.

It has already been pointed out that there have also been established in the County Voluntary Welfare Clinics, which are serving an extremely useful purpose.

The Department's Circular suggests the provision of Homes (Rest Homes) where expectant mothers, whose health is below par, could be accommodated for some weeks with a view to improving their general health, and so rendering them more fit mentally and physically to face the event with success.

That suggestion opens up considerable possibilities. When the Local Government (Scotland) Act, 1929, came into operation in May, 1930, the small Burgh Hospitals of Grangemouth and Kilsyth respectively came under the control of the County Council, as part of the Major Health Services.

It was considered that these hospitals were much too small for modern hospital units, and the County Council resolved upon building two up-to-date pavilions as an extension of Bannockburn Hospital.

After a time it was resolved to close the Kilsyth Burgh Hospital, which was in a bad state of repair, and, as soon as the new pavilions at Bannockburn were completed, to consider how Grangemouth Hospital could be best utilised, especially, as the 1929 Act quite evidently foreshadowed the provision by the Local Authority of greatly extended hospital accommodation in the more or less near future.

It was clearly perceived that the Grangemouth Hospital could be made to serve a variety of useful purposes under the Act, e.g.—a sort of Convalescent Home for mothers after a birth and who were feeling the strain of childbearing. Such a holiday, ante-natal or post-natal, or both, away from the cares and worries so often attendant on the routine life of certain mothers would have a very beneficial effect on the health of both the mother and baby, and would thus give the baby a proper start in life.

In view of the probability of even further extensions being required of the Local Authority, as has already been said in the way of hospital accommodation, it may yet be regarded as fortunate that the disposal of the Hospital, at Kilsyth, is still in the Local Authority's hands.

In dealing with this subject of Maternal Welfare, the Department's Circular rightly deprecates anything in the nature of a scare, as nothing could be more calculated to defeat the end in view.

Any gloomy note is to be avoided, and the expectant mother should be encouraged to regard child bearing as a normal physiological function. She should at an early date

consult her medical adviser, and, under his guidance, she should go on with her daily tasks with a cheerful confidence, and trust that all is well.

Birth-rate and Infantile Mortality.—The figures in Table VII. show the steady decrease during the past 45 years in the birth-rate of the County as well as in the infant mortality (i.e., the number of deaths of children under one year old per 1000 births). In the first line of the table, it will be seen that for the ten years 1891 to 1900, the average annual birth-rate was 34.4 per 1000 of population, and that the infant mortality was 111 per 1000 births. From then onward the birth rate has steadily declined until it is not much more than half what it was. Infant mortality has also become much less, although from 1921 onwards, the rates have levelled out to an average of 74.

Table VII.—BIRTHS, BIRTH-RATES AND DEATHS UNDER ONE YEAR OF AGE PER 1000 BIRTHS IN THE COUNTY OF STIRLING, FROM 1891 ONWARDS.

Year	No. of Births	Birth-rate	Deaths under 1 Year	Deaths under 1 Year per 1000 Births
1891 to 1900	23,424	34.4	2601	111
1901 to 1910	23,056	31.3	2253	98
1911 to 1920	20,463	25.3	1825	89
1921 ..	2182	26.9	153	70
1922 ..	1917	23.2	178	93
1923 ..	1852	23.2	133	72
1924 ..	1853	23.6	137	75
1925 ..	1797	22.5	152	84
1926 ..	1822	22.8	127	70
1927 ..	1652	20.8	100	60
1928 ..	1704	21.7	122	71
1929 ..	1596	18.8	97	61
1930 ..	2157	19.3	173	80
1931 ..	2118	19.8	152	72
1932 ..	2160	20.0	180	83
1933 ..	1970	18.0	145	74
1934 ..	2028	18.4	143	71
1935 ..	2029	18.4	145	71

REPORT ON WORKING OF SCHEME.

The following Report is given in the form prescribed by the Department of Health:—

I.—Infantile Mortality.

CAUSES OF DEATH	AGE GROUPS					Total	Rate per 1000 Births
	under 1 week	1-4 weeks	4 weeks to 3 months	3-6 months	6-12 months		
Chlekenpox .. ..	..	..	..	..	..	..	..
Measles .. ..	..	..	..	..	1	1	0.5
Scarlet Fever .. ..	..	..	..	..	..	..	..
Whooping Cough .. ..	..	1	1	1	2	5	2.5
Diphtheria and Croup .. ..	..	..	..	..	2	2	1.0
Erysipelas .. ..	..	1	..	..	..	1	0.5
Tuberculous Diseases .. ..	..	..	..	1	1	2	1.0
Meningitis (not Tuberculous) .. ..	..	..	..	2	1	3	1.5
Hydrocephalus .. ..	..	..	..	1	..	1	0.5
Convulsions	1	1	..	..	1	3	1.5
Pneumonia	1	3	2	5	11	22	10.8
Bronchitis	1	..	2	4	2	9	4.4
Diarrhoea and Enteritis .. ..	..	3	3	5	3	14	6.8
Other Digestive Diseases .. ..	..	..	..	1	1	2	1.0
Congenital Malformations .. ..	..	..	..	..	..	..	..
Congenital Heart	2	..	..	..	..	2	1.0
Premature Birth	24	3	1	..	..	28	13.8
Atrophy, Debility, and Marasmus	14	9	5	..	2	30	14.8
Atelectasis	3	..	..	..	..	3	1.5
Injury at Birth	5	..	..	..	..	5	2.5
Suffocation (overlying)	1	..	..	..	..	1	0.5
Syphilis .. ..	..	..	..	..	..	..	..
All other Causes	5	1	1	2	2	11	5.4
Total	57	22	15	22	29	145	71

II.—Births.

Number Registered	2029
Legitimate, 1893; Illegitimate, 136.	
Number Notified	1516
Number Attended by a Doctor	1083
Number Attended by Midwife	549
Number of Still-Births	60

III.—Maternal Mortality.

Number of deaths resulting from Miscarriage or Child-birth	7
Number of deaths resulting from Puerperal Sepsis	12

IV.—Report under Midwives Act, 1915.

(1) LIST OF CERTIFIED MIDWIVES.

- 5659—A. M. Alexander, Braewyner, Buchlyvie.
 1722—Agnes Allison, Broomfield Cottage, Polmont.
 2451—Helen Bryce, 26 Victoria Place, Polmont.
 695—Elsie Campbell, 34 Mary Street, Laurieston, Falkirk.
 1842—Susan Chalmers, c/o Mrs. James Buchanan, 7 Kirkslap, Denny.
 823—Mary Cockburn, Shieldhill, by Falkirk.
 558—Helen Copland, Broomhill, Laurieston.
 902—Mary R. Dickie, Galaview, Plean.
 597—Agnes English, 1 Glenbank, Glen Village, by Falkirk.
 3598—Elizabeth Ferguson, 63 Broad Street, Denny.
 3017—Margaret Gibson, 24b Atholl Place, Stirling.
 12,099—Christina Hailstones, 99 4th Block, Fallin, by Stirling.
 5972—Margaret Horn, School Cottage, Greenhill.
 1107—Sarah Hughes, 22 High Street, Kilsyth.
 5850—Annie Hunter, 97 King's Road, Grangemouth.
 5508—Eliza M. Jamieson, Clifford Home, Bonnybridge.
 11,809—Catherine B. Johnstone, Crosslea, Lennoxton.
 2333—Mary Law, Craigbank, Avonbridge.
 9983—Euphemia N. Morrill, 26 McLachlan Street, Larbert.
 3166—Margaret McCluskey, 45 King Street, Stirling.
 2166—J. S. McDonald, 32 Tryst Road, Stenhousemuir.
 5425—Mary C. McGregor, 13 The Cottages, Fallin, by Stirling.
 1952—Mary McKay, 12 Gordon Terrace, Carron Road, Falkirk.
 11,881—Christina C. McKinnon, Drumpark, Bridge of Allan.
 5850—Isabella H. McLaren, 20 Wallace Street, Grangemouth.
 4849—Isabella McNab, 18 Wallace Street, Grangemouth.
 7384—Elizabeth McPhee, Airth, by Falkirk.
 3004—Ellen Muir, 12 Anderson Terrace, Longcroft.
 398—Mary Peebles, 81 Backbrae Street, Kilsyth.
 591—Christian F. Pringle, Grant Villa, Keir Street, Bridge of Allan.
 5386—J. A. Rankin, South Barrwood, Kilsyth.
 10,601—Margaret M. Robertson, Crosslea, Lennoxton.
 6791—Margaret Robson, 32 Main Street, Cambusbarron, Stirling.
 2708—Jean L. Shearer, 451 King Street, Stenhousemuir, Larbert.
 2107—Elizabeth Sommerville, 4 Woodside Crescent, Fallin, by Stirling.
 5250—Jane R. Stewart, Moana Mara, Kippen.
 5509—Williamina Taylor, Clifford Home, Bonnybridge.
 1831—Charlotte Thomson, 59 D Block, Fallin, by Stirling.
 557—Helen Thomson, 183 Kilsyth Road, Banknock.

- 8462—Jane L. Waugh, 6 Bruce Street, Bannockburn.
 490—Isabella Wells, Milnquarter Place, Bonnybridge.
 456—Mary Wilkie, 101 Glasgow Road, Dennyloanhead.
 7053—Margaret R. Wilson, 21 George Street, Stirling.
 503—Jessie G. Young, Greylands, Slamannan.

(2) BIRTHS IN AREA OR DISTRICT.

Total Number of Births during 1935.	2029
Total Number of Deaths of new-born children (within ten days) during 1935	56
Actual Number of Births attended by Midwives during 1935	549
Actual Number of Deaths of new-born children (within ten days) occurring in the practice of Midwives during 1935.	14
Actual number of Cases not attended by a Doctor or Midwife during 1935—Births	0
Actual number of Cases not attended by a Doctor or Midwife during 1935—Deaths	0

(3) CASES OF OPTHALMIA NEONATORUM.

Total Number of Cases during 1935	3
Actual Number of Cases occurring in the practice of Midwives during 1935.. . . .	0
Actual number of Cases occurring where confine- ment not attended by a Doctor or Midwife during 1935	0

(4) CASES OF PUERPERAL SEPSIS.

Total Number of Cases during 1935	15
Total Number of Deaths during 1935	8
Actual Number of Cases occurring in the practice of Midwives during 1935.. . . .	0
Actual Number of Deaths occurring in the practice of Midwives during 1935	0
Actual number of Cases occurring where confine- ment not attended by a Doctor or Midwife during 1935—Cases	0
Actual number of Cases occurring where confine- ment not attended by a Doctor or Midwife during 1935—Deaths	0

(5) CASES OF PUERPERAL PYREXIA.

Puerperal Pyrexia is defined in the Regulations of the Department of Health for Scotland as any ferbrile condition other than a condition which is required to be notified as puerperal fever under the Infectious Disease (Notification) Act, (1889) occurring in a woman within 21 days after child-birth or miscarriage in which a temperature of 100.4° Fahrenheit (38° Centigrade) or more has been sustained during a period of 24 hours or has recurred during that period.

Total Number of Cases during 1935	..	..	12
Total Number of Deaths during 1935	..	..	2
Actual Number of Cases occurring in the practice of Midwives during 1935	..	..	0
Actual Number of Deaths occurring in the practice of Midwives during 1935	..	..	0
Actual Number of Cases occurring where confinement not attended by a Doctor or Midwife during 1935—Cases	..	..	0
Actual Number of Cases occurring where confinement not attended by a Doctor or Midwife during 1935—Deaths	..	..	0

(6) CASES OF STILL-BIRTH (DEAD BORN).

Total Number of Cases during 1935	..	..	60
Actual Number of Cases occurring in the practice of Midwives during 1935	..	..	10

(7) CASES OF EMERGENCY.

The total number of Cases of Emergency in which Medical Practitioners have been called in under Section 22 of the Midwives (Scotland) Act, 1915, during 1935, distinguishing the different classes of emergency.

Delayed Labour	..	..	..	..	38
Ruptured Perineum	..	..	..	..	19
Breech Presentation	..	..	..	..	7
Premature Labour	..	..	..	..	6
Weakness of Mother	..	..	..	..	7
Weakness of Baby	..	..	..	..	6
Mal Presentation	..	..	..	..	4
Retained Placenta	..	..	..	..	4
Eclampsia	..	..	..	..	4
Rapid Pulse	..	..	..	..	4
Still Birth	..	..	..	..	3
Contracted Pelvis	..	..	..	..	3
Others	..	..	..	..	22

(8) GENERAL REPORT ON THE WORKING OF THE ACTS.

As in former years the work under the Midwives (Scotland) Act has gone on very smoothly. From time to time the registered midwives in the area were visited by the Health Visitors and no cause for serious complaint was found.

V.—Home Visitation.

	Number Visited.	Total Visits.
Infants	1641	4880
Children (1-5 years) ..	6763	6763
Expectant Mothers ..	202	264
	<hr/> 8606	<hr/> 11,907

VI.—Voluntary Health Visitors' Reports.

Under this heading, I give in alphabetical order, a note of the reports received from the Voluntary Welfare Clinics mentioned at the beginning of this Section:—

BANNOCKBURN.—The meetings are held every Thursday afternoon from 2.30 to 4.30. Thirty-nine Clinics were held, the number of babies on the register being 68, 45 of which were enrolled during the year, the total number of attendances being 1006.

Tea is provided for the mothers at all Clinics, and a very pleasant afternoon tea party was provided by Miss Mitchell and Miss Wilson in the Masonic Hall. After a cinematograph entertainment and musical programme, prizes were presented by Miss Wilson to mothers and babies for good attendance.

BLACKBRAES.—This Clinic meets every Thursday fortnight between 3 and 4 p.m. There were 16 new enrolments, and the number on the register at the end of the year was 29. Total attendances numbering 292.

On 24th January, Mrs. Hogg, first president of the Clinic, was presented with a handbag (subscribed for by the mothers, doctor, and committee of the clinic) on leaving the district, and Mrs. Dean elected president in her stead. On 12th December, the mothers and babies were given a Christmas party, each mother received a cake, and apple cake, and box of sweets, and each baby a toy from the Christmas tree.

CAMPSIE.—Here the meetings are held on the second and fourth Tuesdays of the month from 3 to 4 o'clock in the afternoon. The attendances numbered well over 250. Dr. Doig frequently attends the Clinic and examines children brought to his notice. The usual Christmas party was much enjoyed.

CARRON.—The Clinic still continues to meet each alternate Friday afternoon from 3 to 4 p.m. in Carronshore School; and the number of meetings held during 1935 was 25; the number of attendances was 324, and the number of babies enrolled 36.

Two ladies of the Carron District Committee take it in turn to attend the Clinic and supply the mothers with tea, and a special tea was again provided at Christmas time.

COWIE.—The meetings are held every alternative Monday afternoon from 2 p.m. till 4 p.m. Twenty Clinics were held, the number of babies on the register being 106, 66 were enrolled during the year. Total number of attendances was 644. Tea is provided for the mothers every Clinic day, but, in addition, a Christmas party is given when each child receives a gift. A Summer outing is also provided for mothers and babies, and same is much appreciated.

DENNY.—The number of babies on the roll is 80, almost the same as last year. The attendance at the Clinic is from 18 to 20 at each meeting which is held every second Tuesday from 4 to 5.30 p.m. The local doctors and nurse are in attendance, and the weighing and general examination are carefully carried out and results noted. In cases of necessity, special foods and medicines are given.

The mothers and children had a Christmas treat, and an outing in June. These extras were made possible by the kindness of Denny School Staff who ran a Whist Drive for the benefit of the Clinic, and handed over a substantial sum to be devoted to this special purpose. The Clinic has been held regularly since its reopening in April, 1935, and the meetings are being continued throughout the Summer.

FALLIN.—Good work continues to be done at this Clinic where the attendances number about 450 in the year. A Summer outing and the annual Christmas treat was much enjoyed by the mothers and children.

GRANGEMOUTH.—The meetings here are held weekly on Wednesdays from 3 to 4 p.m. in the Lesser Town Hall. Forty-nine meetings were held, the total number of attendances being 653. In all, 109 children attended, of whom, 101 were under one year old. The number of visits paid by the nurse to newly born children was 201.

KILSYTH.—The Child Welfare Clinic at Kilsyth is held once a week on Thursday from 4 p.m. until 5 p.m., in a room of the Public Assistance Building.

The number of meetings during 1935 was 46.

A. Number of children attending	..	..	170
(1) Under one year of age	..	..	160
(2) Over one year of age	..	..	10

B. Total number of attendances	..	..	1,259
(1) Under one year of age	..	..	1,241
(2) Over one year of age	..	..	18
C. Illnesses recorded:—			
Hernia .. .. .	..	..	5 cases
Skin conditions	..	..	6 ,,
Chest conditions	..	..	8 ,,
Discharging ears	..	..	3 ,,
Others .. .. .	..	..	23 ,,

MUIRAVONDSIDE.—Every second Thursday a meeting is held for mothers and children in the Craigend Miners' Welfare Institute, and throughout the year over 500 attendances were made, the number on the roll being between 50 and 60.

POLMONT.—This Clinic opened with 5 babies in June, 1932, and up to December, 1935, 129 babies had been on the books. On 1st January, 1935, there remained 28 babies on the roll, and during the year, 30 have joined making a total of 58. Of these, 10 have become over age, 2 have left the district, and 4 have left for various causes, leaving on the roll on 1st January, 1936, a total of 42.

There have been 26 Clinics held during the year, and 650 attendances, an average of 25. Four babies have made perfect attendance. The health of the babies has been good, and with very few exceptions, they put on weight each fortnight.

STANDBURN.—Since the commencement of the Clinic in 1925, 220 babies have been enrolled. There were 14 new babies this session, and at the end of the year the number on the register was 24, and the total attendances were 227.

The Clinic meets fortnightly on Thursday afternoon between 3 and 4 p.m. Tea is always provided for the mothers. In December the mothers and babies were given a Christmas party which was very much enjoyed.

VII.—Ante-Natal Consultations. and

VIII.—Post-Natal and other Consultations.

See Reports on Maternity Homes under XVI.

IX.—Child Welfare Consultations.

See No. VI.

X.—Special Treatment Centres.

(1) Teeth—

(a) Number of attendances—(i.) Mothers, 6; (ii.) Children, 20.

(b) Number of dentures supplied—None.

(c) Classified summary of conditions remedied :—
(i.) Mothers—Oral sepsis, 2, Caries 4; (ii.) Children—Caries, 20, Oral Sepsis, 0.

(2) Eyes—

(a) Number of attendances—25.

(b) Classified summary of conditions remedied—
All Strabismus.

(3) Other ailments—

(a) Number of attendances—None.

(b) Classified summary of defects—

(4) Ultra-Violet Light Clinic—

(a) Number of attendances—None.

(b) Number of cases—

(c) Note of conditions treated and results obtained—

NOTE.—Owing to continued prevalence of scarlet fever and diphtheria, the Ultra-Violet Clinics at Bannockburn and Camelon Hospitals remained closed during the year.

XI.—Day Nurseries, Kindergartens, and Play-Centres.

None.

XII.—Food and Milk.

(a) Number of persons in respect of whom applications were made for food or milk—(i.) Mothers, 108; (ii.) Children, 142.

(b) Number of cases certified on medical grounds as requiring food or milk—(i.) Mothers, 83; (ii.) Children, 118.

(c) Number of cases under (b) certified as necessitous—(i.) Mothers, 83; (ii.) Children, 118.

XIII.—Measles.

(a) Number of cases notified. (If notification is in force. If partial notification is in force, this should be stated)—Not notifiable.

(b) Number of deaths—(i.) from measles, 3; (ii.) from sequelae, not known.

(c) Number of cases removed to hospital—0.

(d) Number of special domiciliary visits—10.

(e) Details of special staff, if any, engaged for epidemics—No special staff.

XIV.—Whooping Cough.

(a) Number of cases notified—Disease is not notifiable.

(b) Number of deaths—(i) from whooping cough, 8; (ii.) from sequelae, not known.

(c) Number of cases removed to hospital—0.

(d) Number of special domiciliary visits—56.

(e) Details of special staff—No special staff.

XV.—Ophthalmia Neonatorum.

(a) Number of cases notified—(i.) by doctor, 3; (ii.) by midwife, 0; (iii.) by institution, 0.

- (b) Number of cases in which infection is gonococcal (if known)—Not known.
 (c) Number treated in residential institutions—0.
 (d) Number of cases in which there was appreciable loss of vision—0.

XVI.—Maternity Hospitals or Homes.—Note has already been made at the beginning of this Section (Medical Services) as to the provision and management of the two Maternity Homes, one in Stirling and the other in Falkirk, and the following are the reports for the years by the physicians in charge:—

STIRLING ROYAL INFIRMARY.

MATERNITY CENTRE.

(Physician in Charge—Dr. Eva Cairns.)

ANNUAL RETURN OF CASES ADMITTED FROM THE COUNTY OF STIRLING.

Total Admissions	..	..	..	..	150
I. Ante-natal Cases	..	..	..	..	20
Conditions found:—					
Hyperemesis	..	..	..	..	3
Albuminuria	..	..	..	..	4
Pyelitis	..	..	..	..	3
Threatened Abortion	..	..	..	..	2
Anæmia and Debility	..	..	..	..	2
Eclampsia	..	..	..	..	1
Bronchitis—Asthma	..	..	..	..	1
For Version	..	..	..	..	1
For Investigation	..	..	..	..	1
False Labour	..	..	..	..	1
Toxæmia—Parotitis	..	..	..	..	1
Results:—					
Satisfactory	..	..	..	..	18
Died	..	..	..	..	2
Cause of Death:—					
Eclampsia	..	..	..	..	1
Toxæmia—Septic Parotitis	..	..	..	..	1
II. Abortions—9.					
Complete Abortions	..	..	..	..	2
Incomplete Abortions	..	..	..	..	4
Hydatidiform Mole	..	..	..	..	1
Induced Abortions	..	..	..	..	2
Pulmonary T.B.—Hysterotomy	..	..	..	..	—
Previous Insanity	..	..	..	..	—
Results:—					
Satisfactory	..	..	..	..	9
Died	..	..	..	..	0

III. Normal Deliveries—96.

Doctor Present	22
No Abnormality	66
Abnormalities Found:—	
Induced Labour	10
Albuminuria	7
Eclampsia	7
Breech Presentation	2
Twins	3
Prolapsed Cord	1
Hydramnios	1
Pyelitis	2
Placenta Prævia	2
Mastitis	1
Hyperemesis	1
Cancer of Breast	1
Prematurity	1

IV. Abnormal Deliveries—24.

Conditions Found:—	
Contracted Pelvis and Disproportion ..	6
Inertia—Fœtal or maternal Distress ..	10
Breech Presentation	1
Occipito—Posterior Presentation ..	1
Transverse Presentation	2
Rigid Perineum	1
Eclampsia	1
Albuminuria	1
Cardiac Disease	1
Type of Delivery:—	
Forceps	17
Cæsarean Section	4
Manipulative	2
Craniotomy	1
Other Cases—1.	
Ectopic Pregnancy	1
Result:—	
Satisfactory	1

V. Infants—124.

Live Births	119	Male	67
Still Births	5	Female	57
Neonatal Deaths	6		
Premature ..	3		
Birth Injury ..	3		

VI. Ante-natal Clinic.

New Cases seen	..	..	..	..	288
Total Attendances	..	..	..	..	806

(These figures include all attendances at the Clinic, not only County cases.)

FALKIRK AND DISTRICT ROYAL INFIRMARY.
MATERNITY HOME.

(Physicians in Charge—Dr. Jean A. Horne and Dr. John L. Horne).

ANNUAL REPORT—YEAR 1935.

The number of Cases admitted during the year ending 31st December, 1935, was 384, comprising—Burgh, 148; County, 211; and Hospital Private, 25.

Of these 65 were Pre-natal cases, i.e. complications arising during the course of Pregnancy.

231 were Normal Deliveries. 50 of these had complications—Albuminuria, Cardiac conditions, Rigidity of Cervix, Tuberculosis, Hæmorrhage, Chorea.

34 Cases necessitated the application of Instruments.

In 13 Cases, labour was surgically induced.

7 Cases arrest of Hæmorrhage.

2 Cases Internal Manipulation.

9 Cases Cæsarean Section.

9 Cases were post-partum, i.e. transferred to Hospital owing to complications arising following confinement at home.

The number of Infants born during the year was 333, comprising:—Burgh, 131; County, 178; and Private, 24.

Of these 295 were born alive, 21 were still-born, and 17 were either macerated or premature, or abnormalities.

Deaths of Infants under 1 week amounted to 11.

Maternal Deaths were 5, as under :—

Two were failed forceps emergencies, one dying within 12 hours of admission, one within 36 hours of admission.

Two Eclamptics died without being delivered, and both died within 6 hours of admission.

One Cerebral Hæmorrhage (5 months pregnant) died within 4 hours of admission.

The Maternity Mortality was slightly over 1 per cent.

STATISTICS.

I. Pre-natal Cases—65.

Burgh, 25.

County, 40.

Conditions found:—

Albuminuria	..	..	..	..	20
Ante-partum Hæmorrhage	..	..	..	..	17
Hyperemesis	..	..	..	..	11
Hydramnios	..	..	..	..	2
Eclampsia	..	..	..	..	2
Pyelitis	..	..	..	..	5
Cerebral Hæmorrhage (5 months)	..	..	..	..	1
Cardiac	..	..	..	..	3
False Labour	..	..	..	..	2
Prolapse of Uterus	..	..	..	..	2

Results:—

Included in other Deliveries	..	..	..	..	27
Satisfactory	..	..	..	..	35
Deaths	..	..	..	..	3

Cause of Death:—

Eclampsia (Undelivered and Moribund on admission)	..	..	..	..	2
Cerebral Hæmorrhage (5 months) (Undelivered and Moribund on admission)	..	..	..	..	1

II. Normal Deliveries without Complications—231.

Burgh, 92.

County, 125.

Private, 14.

Results:—

Satisfactory	..	..	..	..	231
Deaths	..	..	..	..	Nil

III. Normal Deliveries with Complications—50.

Burgh, 20.

County, 25.

Private, 5.

Complications Found:—

Hydramnios	..	..	..	..	2
Hyperemesis	..	..	..	..	1
Albuminuria	..	..	..	..	18
Ante-partum Hæmorrhage	..	..	..	..	8
Veneral Disease	..	..	..	..	1
Breech Presentation	..	..	..	..	4
Phthisis	..	..	..	..	1
Twins	..	..	..	..	2
Chorea	..	..	..	..	1
Mental Deficiency	..	..	..	..	1

Brow Presentation	..	..	..	1
Footling ..	..	..	..	1
Failed Forceps ..	..	..	..	1
Prolapse of Uterus	..	..	..	2
Anæmia ..	..	..	..	1
Tumour of Cervix	..	..	..	1
Contracted Pelvis	..	..	..	2
Rigid Cervix ..	..	..	..	1
Retained Placenta	..	..	..	1

Results:—

Satisfactory	..	..	..	..	50
Deaths	..	..	..	..	Nil

IV. Abnormal Deliveries—52.

Burgh, 19. County, 28. Private, 5.

Conditions Found:—

Phthisis ..	..	..	..	..	2
Occipito Post Positions	..	..	..	..	7
Eclampsia ..	..	..	..	..	3
Fatigue of Patient	..	..	..	..	8
Delayed Labour ..	..	..	..	..	11
Contracted Pelvis	..	..	..	..	10
Placenta Prævia ..	..	..	..	..	2
Ante-partum Hæmorrhage	..	..	..	..	6
Cardiac Conditions	..	..	..	..	3

Treatment:—

Forceps ..	..	..	..	..	30
Surgical Induction	..	..	..	..	13
Cæsarean Section	..	..	..	..	9

Results:—

Satisfactory	..	..	..	..	50
Deaths	..	..	..	..	2

Cause of Death:—

Obstetric Shock (Failed forceps outside)	1
Peritonitis (Failed forceps outside) ..	1

V. Post-partum Cases—9.

Burgh, 3. County, 4. Private, 2.

Conditions found:—

Delivered before Admission	..	..	1
Retained Placenta ..	..	..	5
Post-partum Eclampsia	..	..	3

Treatment:—

Placenta Manually Removed	3
---------------------------	----	----	---

Results:—

Satisfactory	..	..	..	..	9
Deaths	..	..	..	..	Nil

VI. Number of Infants—333.

Burgh, 131; County, 178; Private, 24.

Alive—295.

Burgh, 110; County, 163; Private, 22.

Still-born—21.

Burgh, 10; County, 15; Private, 1.

Macerated-Prematurity Abnormality—17.

Burgh, 6; County, 10; Private, 1.

Died within 1 week—11.

Burgh, 4; County, 7.

Infantile Mortality.

Cause of Death:—

Jaundice	..	..	..	..	2
Prematurity	..	..	..	..	5
Sub Tentorial Hæmorrhage	..	..	..	..	1
Prematurity	after	Ante-partum			
Hæmorrhage	..	..	..	..	2
Marasmus	..	..	..	..	1

XVII.—Homes for Unmarried Mothers before and after Confinement.—None.

XVIII.—Hospitals for Sick Children.—None.

XIX.—Convalescent Homes.—None.

XX.—Boarding -out.

No children were boarded-out by Local Authority.

XXI.—Home Helps.

None employed.

XXII.—Educational.

Classes, Lectures, etc.—None.

XXIII.—Note of Agencies, not referred to above, associated with Scheme.—None.

XXIV.—Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations (Scotland), 1929.

- (1) Total number of cases of (a) puerperal fever and (b) puerperal pyrexia occurring in the area of the Local Authority. (Corrected figures as finally diagnosed.) (a) Puerperal fever, 15; (b) puerperal pyrexia, 12.
- (2) Total number of cases removed to Infectious Diseases Hospital—(a) puerperal fever, 15; (b) puerperal pyrexia, 9.
- (3) Total number of deaths—puerperal fever, 8; puerperal pyrexia, 2.
- (4) Number of cases of (a) puerperal fever and (b) puerperal pyrexia following instrumental delivery—Not ascertained.
- (5) Number of deaths occurring in cases included under (4)—Not known.
- (6) Number of cases of puerperal fever and puerperal pyrexia where the Local Authority provided assistance on the request of medical practitioners for—

	Puerperal	
	Fever.	Pyrexia.
(i.) Consultant Service ..	3	1
(ii.) Bacteriological Examinations —	—	—
(iii.) Skilled Nurses at Home ..	—	—
(iv.) Hospital Treatment ..	15	9

- (7) Observations on the working of the Regulations. including any remarks on the extent to which assistance is sought by and granted to medical practitioners.—As before, the most of the cases notified were removed to Robroyston Hospital, Glasgow, by agreement with the Glasgow Health Department. Where necessary, medical practitioners readily avail themselves of the Services of the Consultants appointed by the County Council, namely, Dr. McFarlan of Stirling, and Dr. Hunter of Falkirk.

XXV.—Other Provisions (e.g., Treatment of Pneumonia and Bronchitis; after-care of cases of Poliomyelitis Anterior Acuta)—None.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The annual report on School Medical Inspection and Treatment of School Children has already been printed separately. The School Medical Inspection year ends as at 31st July, and it is accordingly somewhat inconvenient to have it included in this report.

INFECTIOUS DISEASE.

The general incidence of infectious disease continued high throughout the year, but not quite so high as in the two previous years. The number of Cases notified was 1569 as compared with 1806 in 1933, and 2251 in 1934. Tables VIII. and IX. show the figures, the former giving details for the various parishes and small burghs, and the latter showing the age distribution of the diseases.

Enteric Fever.—Two cases of true enteric fever occurred, and, in addition, four cases of the infection known as paratyphoid B were notified. This disease is similar in some respects to typhoid or enteric fever, but as a rule, is much less severe in type. The six cases had no connection with each other, one being in Dunipace Parish, one in Denny Burgh, one in Kilsyth Burgh, one in the Parish of Falkirk, one in Balfron Parish, and one in Killearn Parish. Four of the patients were removed to hospital and one unfortunately proved fatal.

Scarlet Fever.—The epidemic of scarlet fever which began early in 1933, and continued throughout 1934, still persisted in 1935, but with a definite downward trend as will be seen from the accompanying chart (p.90) which shows at a glance the general incidence of cases both of scarlet fever and of diphtheria from January, 1933, until the end of June of the present year (1936). It will be noticed from the chart that the scarlet fever curve rises to its highest peak in the fourth quarter of 1933, thereafter, falling to less than half in the third quarter of 1934. There was again a sharp rise in the last three months of that year but in the beginning of 1935, there was a considerable drop in the figures, since when, the numbers notified have kept within reasonable limits. It is to be hoped that this epidemic of scarlet fever has come to an end, but it is unsafe to prophesy.

Table VIII.—RETURN OF CASES OF INFECTIOUS DISEASE NOTIFIED, ETC., DURING THE YEAR ENDING 31st DECEMBER, 1935.

DISEASE	NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.									
	At all Ages	At Age—Years.							Cases removed to Hospital	Cases not removed to Hospital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and up-wards		
		1	2	3	4	5	6	7	8	9

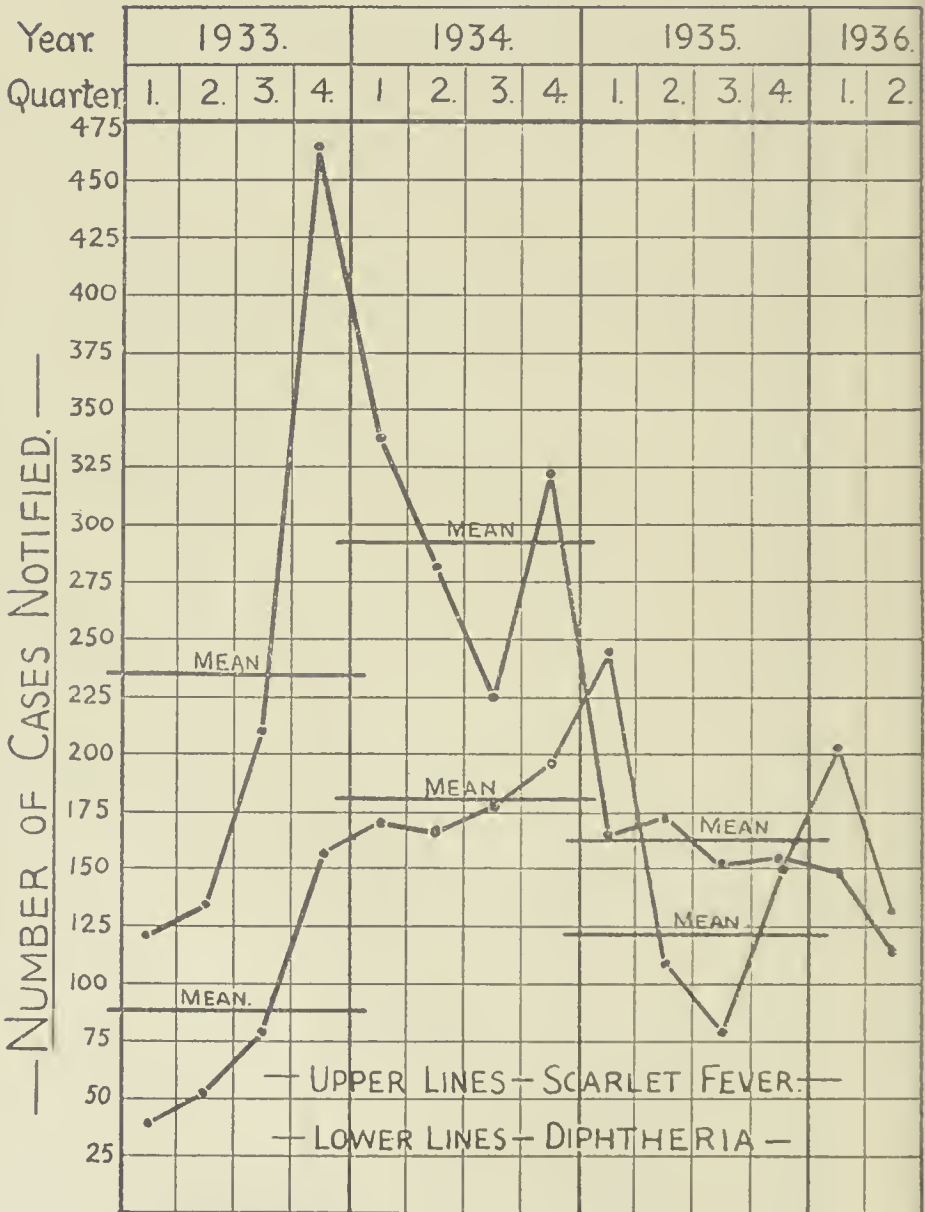
A.—DISEASES SPECIFIED IN THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889, OR NOTIFIABLE IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

	6*	3*	3*	4*	2*	Cases notified in a previous year and removed to Hospital for the
Typhoid or Enteric Fever	6*	..	..	..	3*	3*	..	..	4*	2*
Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	668	4	211	374	44	33	2	..	635	33	
Diphtheria and Membranous Croup	584	4	109	374	56	37	4	..	568	16	
Erysipelas	35	..	1	..	1	12	16	5	3	32	
Puerperal Fever	15	..	..	..	3	12	..	..	15	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever .. ..	..	..	..	..	..	..	..	..	..	..
Continued Fever .. ..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum	3	3	..	..	..	..	..	..	..	3
Infective Jaundice .. ..	..	..	..	..	..	..	..	..	..	..
Malaria .. ..	..	..	..	..	..	..	..	..	..	..
Dysentery	1	..	..	1	..	..	..	..	..	1
Acute Poliomyelitis .. ..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	2	..	..	..	2	..	..	..	2	..
Acute Primary Pneumonia	77	9	17	15	7	14	10	5	13	64	
Acute Influenzal Pneumonia	29	2	1	1	7	12	2	4	12	17	
Puerperal Pyrexia	12	..	..	..	4	8	..	..	9	3
Plague .. ..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Fever	1	..	1	..	..	..	..	..	1	..
Pulmonary Tuberculosis	72	1	2	6	20	32	9	2	41	31	7
Non-Pulmonary Tuberculosis	64	1	15	30	13	2	2	1	46	18	4
Total	1569	24	357	801	160	165	45	17	1349	220	11

* (Para-Typhoid B. 4 2 2 3 1)

PARISH	Smallpox	Diphtheria and Membranous Croup	Erysipelas	Scarlet Fever	Typhus Fever	Enteric Fever	Continued Fever	Puerperal Fever	Puerperal Pyrexia	Cerebro-Spinal Fever	Ophthalmia Neonatorum	Malaria	Dysentery	Infantile Paralysis	Acute Primary Pneumonia	Acute Influenza Pneumonia	Infective Jaundice	Encephalitis Lethargica	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total
Denny	35	1	32	..	..	..	..	..	..	..	..	..	..	11	..	..	..	4	3	86
Dunpace	3	..	3	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	9
Denny and Dunipace (Burghal)	38	2	33	..	1	..	1	1	..	..	..	..	..	24	..	..	..	5	1	106
Gargunnoch	1	..	1
Kilsyth	18	3	25	..	..	..	1	1	..	1	..	..	..	2	2	..	..	1	..	53
Kilsyth (Burghal)	10	5	29	..	1	..	6	2	..	..	..	..	..	8	9	..	..	6	5	81
Kilpen	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4
Logie	16	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	19
Bridge of Allan (Burghal)	6	..	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	26
St. Ninians	112	8	85	..	..	..	..	2	..	..	..	..	..	4	..	..	..	10	24	245
Stirling	3	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
Alrth	12	2	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32
Falkirk	58	2	45	..	1	..	1	..	..	..	..	..	..	9	7	..	..	6	5	134
Graecemouth	39	2	49	..	..	..	..	3	..	1	..	..	..	1	..	..	..	5	2	102
Grangemouth (Burghal)	73	4	96	..	..	..	1	2	..	..	..	1	..	3	4	..	..	8	5	194
Larbert	64	2	82	..	..	..	2	2	..	..	..	1	..	2	1	..	2	17	6	179
Muiravonside	69	..	42	..	..	..	2	..	..	..	..	..	..	..	1	..	1	2	1	119
Slamannan	16	1	40	..	..	..	1	..	..	..	..	..	..	..	2	..	..	1	1	62
Baldernock	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Balfon	3	..	4	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	10
Buchanan
Campsie	3	3	47	..	..	..	..	..	..	1	..	..	..	12	2	..	..	3	3	74
Drymen	1	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
Fintury	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Killearn	2	..	3	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	7
Strathblane	3	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	2	8
Total	584	35	668	..	6	..	15	12	1	3	..	1	..	77	29	..	2	72	64	1569
Removed to Hospital..	..	568	3	635	..	4	..	15	9	1	..	..	..	..	13	12	..	2	41	46	1349

CHART SHEWING INCIDENCE OF SCARLET FEVER AND DIPHTHERIA—1933—1936.



The following is a note of the more populous Parishes, and the small Burghs with the number of cases notified, in each, and the attack rate per thousand of population.

	Cases.	Attack-Rate per 1000 of population
Slamannan	40	13.5
Kilsyth	25	10.0
Campsie	47	8.9
Grangemouth Burgh ..	96	8.1
Muiravonside	42	7.5
Airth	15	6.7
Bridge of Allan Burgh ..	19	6.5
Larbert	82	6.2
Denny & Dunipace Parishes	35	5.9
Denny Burgh	33	5.9
St. Ninians	85	5.7
Grangemouth	49	5.5
Falkirk	45	5.0
Kilsyth Burgh.. .. .	29	3.4

These have been arranged in the order of severity of attack-rate, and it will be seen that Slamannan has the highest rate, with 13.5 cases per 1000 of population. Kilsyth Parish is second with a rate of 10 per thousand and Campsie third. The Burgh of Kilsyth is last on the list with an attack-rate of only 3.4.

With the decline of the epidemics of scarlet fever and diphtheria, the pressure on the hospitals has considerably abated so that by the end of the first quarter of the present year the wards were working quite within their capacity.

Of the total of 668 cases notified during 1935, 635 or 95 per cent were removed to hospital. The number of fatal cases was 14, giving a fatality rate of 2.4 per cent of the cases.

Diphtheria.—As in the case of scarlet fever, so also did the diphtheria epidemic continue on throughout the year although in a modified degree, the total number of cases being 584 as compared with 711 in 1934. The chart already referred to shows that from the beginning of 1933 until the end of 1934 the number of cases notified each quarter continued increasing, and that in the first quarter of 1935 the curve rose to a peak representing 244 cases. Thereafter, however, there came a lull in the epidemic when the notifications fell to 111 for April, May, and June, and to 78 for July to September.

In the final months of the year, however, the curve again rose and continued to rise in the first quarter of the present year (1936), and from that point, fortunately, the outbreak began to abate.

The hardest hit places were the Parish of Muiravonside, with 69 cases and an attack-rate of 12.4 per 1000 of population;

St. Ninians Parish with 112 cases and an attack-rate of 7.5, and Kilsyth (Landward) with 18 cases, and a rate of 7.2; the lowest rates being in the Burgh of Bridge of Allan, the Burgh of Kilsyth, and the Parish of Campsie, with rates of 2, 1.3 and 0.5 per 1000 of population respectively.

The number of cases removed to hospital was 568 or 97 per cent. In all, 26 cases proved fatal giving a fatality rate of 4.4 per cent of the cases notified. This rate is just fractionally above that for the previous year.

Puerperal Infections.—Twenty-seven cases in all were notified, as compared with 37 in the previous year, and of these, 15 were classified as puerperal fever, the other 12 being puerperal pyrexia. All 15 "fever" cases were removed to Robroyston Hospital, Glasgow and 9 of the "pyrexia" cases were also removed there. The number of deaths from puerperal sepsis was 10.

PREVENTION, DETENTION, AND TREATMENT OF TUBERCULOSIS.

In a preliminary report by the Registrar General, it is stated that the death-rate from all forms of tuberculosis over the whole of Scotland, for the year 1935, was 0.74 per 1000 of population, this figure being fractionally below that for the previous year which was the lowest on record.

In Stirlingshire the tuberculosis death-rate is lower than the Scottish rate, being only 0.55 per 1000, but this is rather higher than the rates for 1933 and 1934, as will be seen from Table X. The death-rate from non-pulmonary tuberculosis, however, constitutes a record, and is just one-fifth of what it was in the quinquennium, 1891-95.

Table X.—MEAN DEATH RATES FROM TUBERCULOSIS IN QUINQUENNIAL PERIODS—1891-1935.

Quinquennial Period	Death Rates per 1000 of Population.		
	All forms of Tuberculosis.	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis
1891-1895	2.07	1.32	0.75
1896-1900	1.80	1.33	0.47
1901-1905	1.58	1.16	0.42
1905-1910	1.55	1.03	0.52
1911-1915	1.34	0.77	0.57
1916-1920	1.00	0.72	0.38
1921-1925	0.86	0.55	0.31
1926-1930	0.69	0.44	0.25
Year 1931	0.70	0.48	0.22
„ 1932	0.69	0.47	0.22
„ 1933	0.48	0.30	0.18
„ 1934	0.49	0.32	0.17
„ 1935	0.55	0.40	0.15

Table XI.—TUBERCULOSIS—STATISTICAL RETURNS, 1935.

I.—RETURN OF CASES OF TUBERCULOSIS NOTIFIED DURING THE YEAR ENDED 31st DECEMBER, 1935.
AREA—County of Stirling.

	NUMBER OF CASES NOTIFIED AS SUFFERING FROM TUBERCULOSIS										No. of Cases notified during year in which diagnosis of Tuberculosis has been confirmed
	AGE-GROUPS.										
	Under 5.	5 and under 10	10 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and upwards	TOTAL.	Under 15 yrs.	15 and upwards
Pulmonary ..	3	3	..	5	12	3	6	2	34	6	28
{ Males ..	..	..	3	15	2	3	..	..	38	3	35
{ Females ..	9	11	6	7	1	1	1	1	37	26	11
Non-pulmonary ..	7	5	7	6	..	..	1	..	27	20	7
{ Males ..	..	..	..	..	..	..	..	..	..	..	..
{ Females ..	..	..	..	..	..	..	..	..	..	..	..

II.—RETURN SHOWING THE NUMBER OF CASES WHICH RECEIVED TREATMENT UNDER THE TUBERCULOSIS SCHEME IN SANATORIA OR OTHER INSTITUTIONS DURING THE YEAR ENDED 31st DECEMBER, 1935.

NUMBER OF PATIENTS.										
		In Institutions on January 1.	Admitted during the year.	Discharged during the year.	Died in the Institution.		In Institutions on December 31.			
Pulmonary	Adults { Males .. { Females ..	18 9	36 35	28 17	7 4	1 ..	18 23			
	Children { Males .. { Females ..	1 ..	1 1	2 1	.. ..	.. ..	.. ..
Non-pulmonary	Adults { Males .. { Females ..	.. 1	13 7	10 7	1 1	.. ..	2 ..	
	Children { Males .. { Females ..	2 1	16 16	12 14	1 ..	.. ..	5 3		
	Total	32	125	91	14	1	51			

III.—RETURN OF NUMBER OF PERSONS RESIDENT IN THE AREA AT 31st DECEMBER, 1935, WHO WERE KNOWN TO BE SUFFERING FROM TUBERCULOSIS.

	NUMBER OF CASES.									
	AGE-GROUPS.									
	Under 5	5 and under 10	10 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and upwards	Total	
PULMONARY.										
Sputum not present { Males .. { Females ..	..	..	..	..	..	..	..	..	15	1
Sputum examined and Tubercle bacilli found .. { Males .. { Females ..	..	..	..	..	..	..	..	..	18	1
Tubercle bacilli never found .. { Males .. { Females ..	..	7	20	54	42	38	20	2	173	6
PULMONARY TOTAL	2	18	29	90	139	104	74	10	475	2
NON-PULMONARY.										
1. Abdominal { Males .. { Females ..	6	15	26	16	9	4	3	..	79	..
2. Spine { Males .. { Females ..	1	10	19	17	8	2	4	..	61	..
3. Bones and joints (exclusive of spine) .. { Males .. { Females ..	4	2	4	5	4	..	..	..	19	..
4. Superficial glands { Males .. { Females ..	1	11	10	11	3	4	2	1	50	..
5. Larynx { Males .. { Females ..	2	27	22	23	5	2	3	..	84	..
6. Other parts or organs { Males .. { Females ..	..	19	16	20	11	1	2	..	69	..
	..	1	2	2	2	1	3	1	8	..
	..	..	2	5	7	8	4	..	26	..
	1	1	2	4	6	4	3	..	21	..
TOTAL	19	96	126	126	65	29	26	1	488	..
PULMONARY AND NON-PULMONARY TOTAL	21	114	155	225	204	133	100	11	963	..

IV.—RETURN OF NUMBER OF PERSONS WHO DIED FROM TUBERCULOSIS IN THE AREA DURING THE YEAR ENDED 31st DECEMBER, 1935, WITH PARTICULARS AS TO PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH AND BETWEEN DISCHARGE FROM AN INSTITUTION AND DEATH.

Number of persons who died from tuberculosis Of whom—	PULMONARY		NON-PULMONARY	
	Males	Females	Males	Females
Not notified or notified only at or after death	..	..	..	..
Notified less than 1 month before death	..	..	..	..
from 1 to 3 months ..	4	2	3	4
" " 3 to 6 ..	2	3	4	2
" " 6 to 12 ..	2	1	..	..
" " 1 to 2 years ..	2	4	..	1
" " over 2 years ..	2	3	1	..

Number of persons who died from tuberculosis Of whom—

Not notified or notified only at or after death

Notified less than 1 month before death

 from 1 to 3 months ..

 " " 3 to 6 ..

 " " 6 to 12 ..

 " " 1 to 2 years ..

 " " over 2 years ..

Number of persons who died from tuberculosis Of whom—

Not notified or notified only at or after death

Notified less than 1 month before death

 from 1 to 3 months ..

 " " 3 to 6 ..

 " " 6 to 12 ..

 " " 1 to 2 years ..

 " " over 2 years ..

Notifications of Tuberculosis.—The figures for notifications still continue low, although the number of pulmonary cases notified, 72, was somewhat above the average of the past two years, but in the case of non-pulmonary tuberculosis the number is considerably below the average of the past few years, being only 64 as compared with 88 in 1934, and 86 in 1933.

With regard to this fall, both in the notification rates and the death-rates from tuberculosis, I have no doubt but that the better living conditions throughout the County combined with the increased care given by dairymen to the cleanliness of milk supplies, and the eradication from dairy herds of tuberculous cows have all played their part.

Institutional Treatment.—At the beginning of the year, 28 pulmonary cases were under treatment in one institution or another, and throughout the year 73 were admitted. Of this total of 101 cases treated, 48 were discharged, 12 died, and 41 remained at 31st December. Of those discharged, the following is a condensed note of the results of their treatment:—

Disease Arrested	..	..	..	1
Very much Improved..	..	..	..	2
Much Improved	..	..	..	4
Improved	..	..	..	37
Not improved	..	..	..	3

In all, 56 cases of non-pulmonary tuberculosis were treated—mostly in the the two Infirmaries and with few exceptions the treatment received proved very beneficial.

Persons known to be suffering from Tuberculosis.—The total number of persons resident in the County who were known to be suffering from tuberculosis as at 31st December, was 963, of whom, 475 were pulmonary cases, and 488 non-pulmonary. These numbers of course vary to some extent from year to year, depending as they do on the number of new notifications, the number who have died or left the County, and the number who have been taken off the register as no longer suffering from the disease.

Table XI. gives detailed figures under the four headings, namely : Part I.—Notifications; Part II.—Institutional Treatment; Part III.—Persons known to be suffering from tuberculosis; and Part IV.—Deaths from tuberculosis with particulars as to period elapsing between notification and death.

Domiciliary Treatment.—During the year, 121 persons received a grant of "domiciliary treatment" as compared with 129 in 1934, and 138 in 1933. As explained in previous

reports, "domiciliary treatment consists of an allowance of extra nourishment, e.g., milk, or milk and eggs, to the value of a few shillings per week, and is given in selected cases where it is considered necessary.

The cumulative number of weeks' treatment worked out at 3700 and the total cost at approximately £560.

TREATMENT OF VENEREAL DISEASES.

The following figures are extracted from the Annual Returns to the Department of Health, and show the number of persons who attended the out-patient departments of the Clinics at Stirling Royal Infirmary, and at Falkirk Royal Infirmary. The number of persons treated as in-patients is also given.

CLINIC AT STIRLING ROYAL INFIRMARY.

(Physician in Charge—Dr. Angus.)

	1935			Total for 1934.	Total for 1933.
	Male.	Female.	Total.		
Number of patients who attended during 1935 ..	286	152	438	454	567
Number under treatment at end of year	124	52	176	202	195
Number of attendances ..	4341	1204	5545	5750	5989

In-Patients.

Number admitted to wards	9	8	17	22	43
Number of "In-patient days"	707	411	1118	1108	1166
Pathological specimens examined by the Staff of the Clinic	—	—	560	820	958
Specimens sent to an approved Laboratory ..	—	—	274	339	369

Distribution of cases arising during the year:—

	New Cases.	Patient Out- Attendances.	Patient In- Days.
Stirlingshire	180	3808	787
Perthshire	15	565	239
Clackmannanshire ..	36	1172	92

The hours for attendance of out-patients remain as before, namely:—

Monday ..	5.30—7 p.m.	..	Males.
Wednesday ..	5.30—7 p.m.	..	Males.
Thursday ..	5.30—7 p.m.	..	Females.

CLINIC AT FALKIRK ROYAL INFIRMARY.
(Physician in Charge—Dr. Ferguson.)

	1935			Total for 1934.	Total for 1933.
	Male.	Female.	Total.		
Number of patients who attended during 1935 ..	163	89	252	267	269
Number under treatment at end of year	57	60	117	116	172
Number of attendances ..	6733	2433	9166	9617	6621

In-Patients.

Number admitted to wards	6	9	15	25	29
Number of "In-patient days"	226	269	495	1023	550
Pathological specimens examined by the staff of the Clinic	—	—	337	309	211
Specimens sent to an approved Laboratory ..	—	—	167	234	174

		New Cases.	Patient Out- Attendances.	Patient. In- Days
Stirlingshire (Falkirk Area)	..	79	9041	451
Stirling Burgh	.. ..	5	54	31
Fifeshire	.. ..	1	2	—
Glasgow	.. ..	2	20	—
Leith	.. ..	2	8	—
Linlithgow	.. ..	4	34	—
Airdrie	.. ..	1	4	—
Outwith Scotland	.. ..	5	3	13

Here the hours of attendance are:—

Monday	..	5.30—7 p.m.	..	Females.
Tuesday	..	7.30—9 p.m.	..	Males.
Wednesday	..	5.30—7 p.m.	..	Females.
Thursday	..	3—4.30 p.m.	..	Males.

TREATMENT OF SICK POOR.

The Chief Public Assistance Officer, Mr. Campbell, has supplied me with the following figures concerning persons receiving outdoor relief, and persons who received institutional treatment under the Poor Law.

(a) Persons who received outdoor medical relief in the Council's area.

Every person on Roll of Outdoor Poor has received such medical relief as required.

	Male.	Female.	Children.	Total
(b) Poor persons who received medical treatment <i>under the Poor Law</i> in—				
(1) The Council's institutions, including combination institutions in which the Council has a share	832	244	36	1112
(2) Other, including voluntary, institutions	33	15	14	62

The arrangements for outdoor medical relief and nursing services remain as before. The work is carried out by local medical officers, and by District Nursing Associations under agreements with the County Council.

HOSPITALS.

Compared with the previous year, the hospital accommodation was not taxed to such a great extent, although the number of admissions was above normal. The total number of cases admitted was 1199, which is fully 500 less than in 1934.

The great epidemics of 1933-34 raised the question very sharply of increased hospital accommodation by the County Local Authority. The Local Government Act of 1929, of course, had foreshadowed the time when the Local Authority's responsibilities with regard to hospital accommodation would be enormously augmented. It was recognised, that it might take many years before all that is implied in the 1929 Act could be attained, but it was also recognised that whatever is done now in the way of hospital provision should be on lines which will synchronise with the ultimate plan.

It was with that in view that the feu at Bannockburn Hospital was enlarged to provide accommodation for three new pavilions of the sectioned type. In the meantime, however, it was decided to proceed with two. In each of these pavilions, there are four sections on either side of a central kitchen ward, making eight cubical sections in each pavilion, each being officially recognised to accommodate two patients, but that figure is very elastic as the pavilions can be made practically open-air. In front of each of the pavilions is a covered verandah ten feet in breadth, and in front of that again, is a cemented area extending the whole length of the pavilions and eight feet in breadth. Many of the patients can be kept on the verandah for the whole twenty-four hours with the greatest benefit.

In addition to these sectioned pavilions, there has also been provided a well equipped operating theatre, for the

treatment of any of the inmates of the hospital who may require immediate surgical attention.

For years past there has been close co-operation between the Voluntary and the Local Authority's hospitals, and, owing to the extra accommodation now available this co-operation will be greatly increased to the benefit of the whole community.

By the end of 1935, the two pavilions were practically completed, and were officially opened on 30th January, of this year.

The following are statistics of admissions, etc., in connection with Bannockburn Hospital, Camelon Hospital, Avonside Hospital, and the Ochil Hills Sanatorium. In connection with the Sanatorium it might be mentioned that a 4 valve X-ray Installation has been provided (for radiography and radioscopy).

Bannockburn Hospital, by Stirling.

A.—In-Patients.

1. Total number of admissions	479
2. Total number of patients discharged ..	474
3. Total number of deaths	24
4. Average duration of stay of patients included in 2 and 3 above	37 days

(Total patient-days divided by the sum of the deaths and discharges)

5. Number of beds occupied :—	
(a) Average during the year	50
(b) Highest, 85 on 7th January, 1935.	
(c) Lowest, 32, on 9th May, 1935.	
6. Number of surgical operations :—	
(a) Under general or spinal anæsthesia	24
(b) Other operations	—

B.—Out-patients.

1. Total number of persons seen in the out-patient department	—
2. Total number of attendances in the out-patient department	—

Camelon Hospital, Falkirk.

A.—In-Patients.

1. Total number of admissions	606
2. Total number of patients discharged ..	543
3. Total number of deaths	11

- | | |
|---|---------|
| 4. Average duration of stay of patients included in 2 and 3 above | 32 days |
| (Total patient-days divided by the sum of the deaths and discharges) | |
| 5. Number of beds occupied :— | |
| (a) Average during the year | 47 |
| (b) Highest, 80, on 16th January, 1935. | |
| (c) Lowest, 34, on 15th August, 1935. | |
| 6. Number of surgical operations :— | |
| (a) Under general or spinal anæsthesia | 12 |
| (b) Other operations | — |

B.—Out-Patients.

- | | |
|---|----|
| 1. Total number of persons seen in the out-patient department | 4 |
| 2. Total number of attendances in the out-patient department | 75 |

Avonside Hospital, Grangemouth.

A.—In-Patients.

- | | |
|---|---------|
| 1. Total number of admissions | 114 |
| 2. Total number of patients discharged .. | 96 |
| 3. Total number of deaths.. .. . | 6 |
| 4. Average duration of stay of patients included in 2 and 3 above | 35 days |
| (Total patient-days divided by the sum of the deaths and discharges) | |
| 5. Number of beds occupied :— | |
| (a) Average during the year | 9 |
| (b) Highest, 23, on 8th February, 1935. | |
| (c) Lowest, 2, on 2nd July, 1935. | |
| 6. Number of surgical operations :— | |
| (a) Under general or spinal anæsthesia | — |
| (b) Other operations | — |

B.—Out-Patients.

- | | |
|---|---|
| 1. Total number of persons seen in the out-patient department | — |
| 2. Total number of attendances in the out-patient department | — |

Ochil Hills, Sanatorium, Milnathort.

A.—In-Patients.

- | | |
|---|------------|
| 1. Total number of admissions | 166 |
| 2. Total number of patients discharged .. | 135 |
| 3. Total number of deaths.. .. . | 20 |
| 4. Average duration of stay of patients included in 2 and 3 above | 34.2 weeks |
| (Total patient-days divided by the sum of the deaths and discharges) | |

5. Number of beds occupied :—
 (a) Average during the year 101.7
 (b) Highest, 109, on 5th July, 1935.
 (c) Lowest, 86, on 1st January, 1935.
6. Number of surgical operations:—
 (a) Under general or spinal anæsthesia —
 (b) Other operations 15

B.—Out-Patients.

1. Total number of persons seen in the out-patient department —
 2. Total number of attendances in the out-patient department —

CONSCIENTIOUS OBJECTORS TO VACCINATION.

As shown by the local registrars' returns the total number of objectors to vaccination under the "Conscience" clause of the Vaccination (Scotland) Act, 1907, was 935 during the year 1935 (see Table XII). For the past five years the numbers have been—

1931	..	..	..	..	..	953
1932	..	..	..	..	..	965
1933	..	..	..	..	..	924
1934	..	..	..	..	..	1009
1935	..	..	..	..	..	935

Total .. 4786

For the same period the births have totalled 10,305, so that approximately 46 per cent. of the population up to five years of age are unvaccinated.

Table XII.—CONSCIENTIOUS OBJECTORS TO VACCINATION.

Parish or Burgh	Parish or Burgh	Parish
Denny and Dunpace .. 43	Airth 40	Balfron .. 6
Denny and Dunpace Burgh 48	Falkirk 110	Baldernock .. 2
Gargunnoch 1	Grangemouth .. 98	Buchanan .. 0
Kilsyth 25	Grangemouth Burgh.. 84	Campsie .. 36
Kilsyth Burgh 93	Larbert 115	Drymen .. 3
Kilpen 5	Mulravonside .. 90	Flinty .. 2
Logie 4	Slamannan 32	Killearn .. 0
Bridge of Allan Burgh .. 0		Strathblane 1
St. Ninians 97		
Stirling 0		
Central Area .. 316	Eastern Area .. 569	Western Area 50

Total for whole County, 935.

DIABETES—PROVISION OF INSULIN.

Under the Public Health Committee's Scheme for the provision of the drug Insulin to diabetic patients, who, in the opinion of the Committee, required assistance in obtaining the drug, 26 patients were supplied, the total quantity amounting to 175,000 units. In such cases, insulin is only given on the request of the medical attendant, and on the understanding that its administration will be under medical supervision. The scheme came into operation in 1927, the number of units supplied through the Health Department being—in 1927, 28,000; in 1928, 42,500; in 1929, 63,000; in 1930, 93,000; in 1931, 77,000; in 1932, 99,000; in 1933, 124,000; and in 1934, 189,000.

Insured persons under the National Insurance Acts may receive insulin through their panel doctor in the usual way, while persons on the roll of Public Assistance may be prescribed for by the local Public Assistance Medical Officer.

VI.—PORT SANITARY ADMINISTRATION.

For the year 1935 the number of vessels entering the Port of Grangemouth was 1627 with a total tonnage of 1,382,594, made up as follows:—

					Number.	Tonnage.
(1) Foreign	..	..	..	..	992	1,142,359
(2) Coastwise	..	..	..	..	635	240,235
Total					1627	1,382,594

Only two vessels had to be subjected to measures for rat destruction, the number of dead rats recovered being 25. One of these was examined bacteriologically, and was found quite free from plague infection. The rats were all of the black variety. One of the ships was deratised by means of sulphur fumigation and the other by cyanogen chloride, and deratisation certificates were duly issued. The number of deratisation Exemption Certificates given was 89. In all, 497 vessels were dealt with under the clauses relating to deratisation.

In addition, ten vessels were boarded on arrival on account of their coming from infected ports, but no further action was necessary.

VII.—WORKSHOPS AND WORKPLACES.

The usual formal Annual Report has been submitted to the Home Office, regarding the administration of the Factory and Workshop Act, 1901, and a copy is given below:—

(1) INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES. (Including Inspections made by Sanitary Inspectors.)

Premises.	Number of		
	Inspections.	Written Notices.	Occupiers prosecuted.
FACTORIES	82	1	—
(Including Factory Laundries)			
WORKSHOPS	385	2	—
(Including Workshop Laundries)			
WORKPLACES	2	—	—
(Other than Outworkers' premises)			
Total ..	469	3	—

(2) DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

Particulars.	Number of Defects			Number of offences in respect of which Prosecutions were instituted
	Found.	Remedied	Referred to H.M. Inspector	
<i>Nuisances under the Public Health Acts:—</i>				
Want of cleanliness	7	7	—	—
Want of ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	4	4	—	—
Sanitary accommodation	Insufficient ..	2	—	—
	unsuitable or defective ..	—	—	—
	not separate for sexes ..	—	—	—
<i>Offences under the Factory and Workshop Acts:—</i>				
Illegal occupation of underground bake-house (s. 101)	—	—	—	—
Other offences	—	—	—	—
(Excluding offences relating to out-work and offences under the Sections mentioned in the Schedule to the Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921.)				
Total ..	13	13	—	—

The inspections numbered 469 in all, 82 being of Factories, 385 of workshops, and 2 of workplaces. All the defects found were remedied, and it was not found necessary to refer any point to H.M. Inspector.

BURGH OF BRIDGE OF ALLAN.

REPORT ON SERVICES NOT TRANSFERRED TO COUNTY COUNCIL.

The population of Bridge of Allan in round figures is 3000, the housing being mostly of the better-class residential character.

Water Supply.—As I have stated in former reports, the water supply is obtained from the Cocks Burn Storage Reservoir, and is excellent both as regards quantity and quality.

Drainage and Sewage Purification.—The Burgh Surveyor reports that the main sewers continue to work well and gave very little trouble. The sewage is discharged into the tidal waters of the Allan.

Housing.—Under the Housing Act of 1935 a housing Census and Survey was undertaken of houses up to £45 rental. The number of houses visited was 557 and of these it was found that 63 were overcrowded in terms of the Act. To remedy this, the Town Council, after consultation with an official from the Department of Health, agreed to build 4 five-apartment houses, 16 of four apartments, and 8 of three apartments—28 houses in all. These it is thought, should meet the situation, having regard to certain re-arrangements being carried out by Messrs. Pullar & Sons, Ltd. amongst their tenants.

Four houses were represented for closure during the year.

Sanitary Conveniences.—The Sanitary Inspector reports that in 40 cases a water closet is used in common by two tenants, and in five cases by three tenants. With regard to the houses having one water closet for every two tenants, the Town Council agreed that as the properties were mostly of an older type, and that as in some cases difficulty would be experienced in placing additional accommodation conveniently, they would not insist on further water closets being installed meantime.

Factory and Workshop Act.—In all 57 inspections were made, 20 being of Factories, and 37 of workshops, but no defects were found.

BURGH OF DENNY AND DUNIPACE.

REPORT ON SERVICES NOT TRANSFERRED TO THE
COUNTY COUNCIL.

During the year the usual Police Census of the population was taken, the result being as follows :—

	Males.	Females.	Total.
Denny	2383	2278	4661
Dunipace	477	417	894
Totals	2860	2695	5555

Water Supply.—With the assistance of the auxiliary supply from the Stirlingshire and Falkirk Water Board, there was an abundant supply throughout the whole year.

Drainage and Sewage Disposal.—Mr. Cook reports that although no new houses were connected to the sewerage system, quite a number of alterations to property were made, involving extensive alterations and additions to existing drainage arrangements. Quite a number of these alterations embraced the addition of bathrooms and water closets to houses, and drainage was provided in each case. In September, work was commenced on the laying of a new sewer to drain a new housing site of 17 acres. A development of 88 houses is at present being proceeded with, but it is probable that still more houses will be built here, with such additions to the sewerage system as may be required.

The Sewage Disposal Works continue to function well, and comparative analyses of samples of crude sewage and of effluent showed that a very considerable degree of purification of the crude sewage is attained. The analysts reported that the effluent was in a satisfactory condition for discharge into a stream in accordance with the standard recommended by the Royal Commission on Sewage Disposal.

Housing.—In my previous report, I gave a short summary of the numbers of houses completed by the local Authority under the various Acts. Bringing this summary up to the 31st December, 1935, the figures are:—

Number of houses completed—

under the 1919 Act	84
„ 1924 „	182
„ 1930 „	146
„ 1933 „	Nil
Total ..	412

Number of houses under construction—

Under the 1930 Act	..	..	..	..	4
„ 1935	„	..	..	..	88
Total					92

Under the New Act of 1935, in common with other Local Authorities, the Town Council completed a Census and Survey of the housing conditions in the burgh under the supervision of Mr. Cook, the Burgh Surveyor and Sanitary Inspector. The following statement prepared by Mr. Cook shows the extent of overcrowding as revealed by the housing census.

HOUSES	NUMBER OF APARTMENTS						TOTALS
	1	2	3	4	5	6 and over	
Surveyed	32	450	445	208	104	—	1239
Overcrowded	15	189	108	37	3	—	352
Percentage Overcrowded ..	47	42	24	18	3	—	28
Required to abate Overcrowding	—	32	166	118	39	5	360
Houses to be rendered Vacant	15	181	96	37	3	—	332
Estimated Surplus	15	149	—	—	—	—	164
or							
New Houses Required ..	—	—	70	81	36	5	192

As already stated, the Council have already 88 houses under construction with a view to remedying the overcrowding shown above.

Common Lodging-Houses.—There are two Common lodging houses, and in both, Mr. Cook reports the Sanitary accommodation, washing facilities, etc., were improved during the year. Both houses continue to be well conducted.

Factory and Workshop Act.—Mr. Cook made 14 inspections of factories and 42 of workshops. One written notice was served with regard to unsuitable or defective sanitary accommodation. The defect was duly remedied.